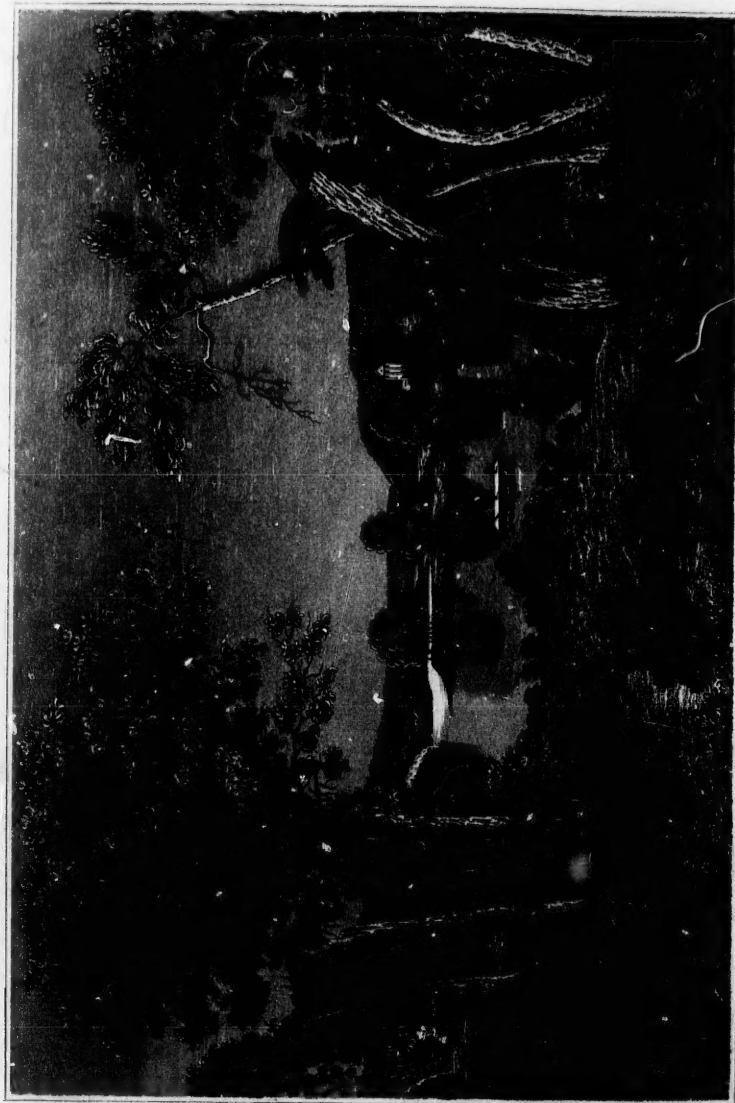


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VIEW ON THE OHIO

THE
HISTORICAL AND SCIENTIFIC
AMERICAN MISCELLANY;

A
Book of Universal Knowledge:

COMPRISING

IMPORTANT EVENTS IN THE HISTORY OF THE WORLD, BIOGRAPHICAL
SKETCHES OF MANY OF THE GREAT

STATESMEN, ORATORS AND POETS,

OF DIFFERENT AGES AND DIFFERENT COUNTRIES.

THE CHOICEST GEMS OF LITERATURE.

DESCRIPTIVE ESSAYS, AND INTERESTING AND IMPORTANT DISSERTATIONS UPON
THE USEFUL ARTS AND SCIENCES, SUCH AS

ASTRONOMY, CHEMISTRY AND PHILOSOPHY.

BY ROBERT SEARS,

author of "Illustrated Description of the Russian Empire;" "Scenes and Sketches in
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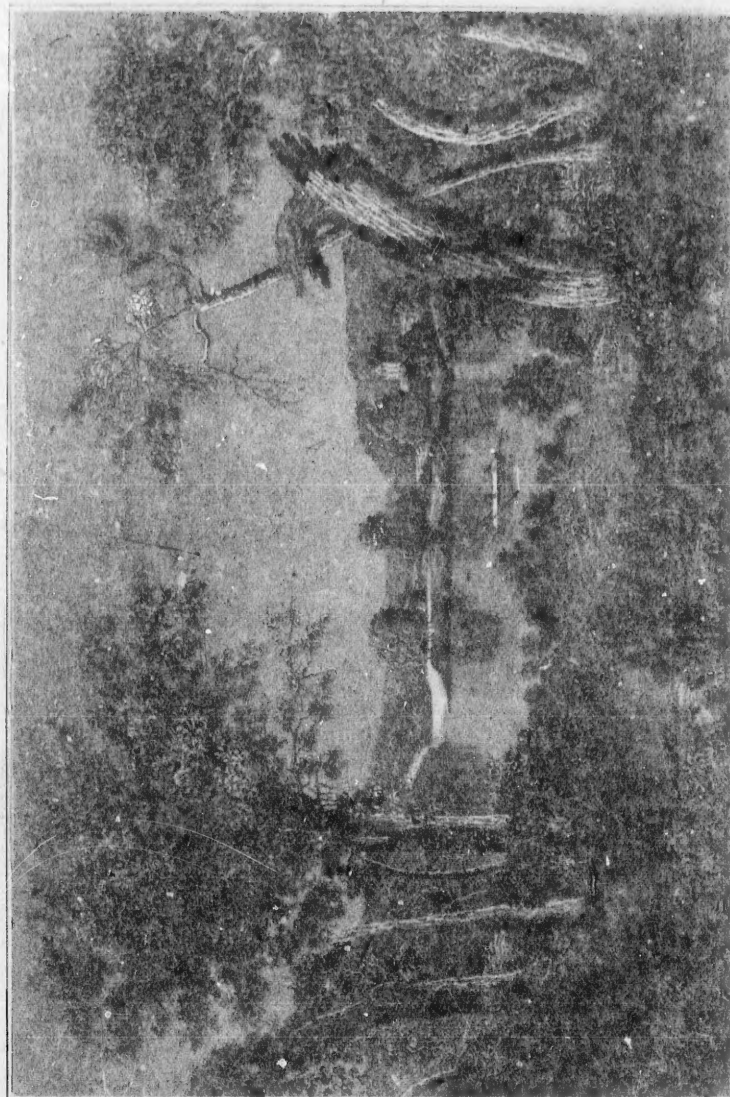
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TWO VOLUMES IN ONE.

COLUMBUS, O.

WEBB & LILLEY, PUBLISHERS

1867.



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PREFACE.



It is a trite and oft-repeated observation, that "knowledge is power." It was this that raised Franklin from the humble station of a printer's boy to the first honors of his country; that took Sherman from his shoemaker's bench, gave him a seat in Congress, and there made his voice to be heard among the wisest and best of his compeers! It raised Simpson from the weaver's loom to a place among the first of mathematicians, and Herschel, from being a poor fifer's boy in the army, to a station among the first of astronomers. It is the philosopher's stone—the true alchymy that turns everything it touches into gold. It is the sceptre that gives us dominion over nature; the key that unlocks the storehouse of creation, and opens the treasures of the universe!

The prime object of this Work is to disseminate this knowledge, combining useful information, fitted alike to the capacity of the child and the adult. It is intended also as a depository of valuable stores, garnered up from sources which, from their magnitude, rarity, and costliness, are as sealed fountains to the great mass of the reading community. In this volume, the choicest reading is presented in a condensed form, illustrative of HISTORY, GEOGRAPHY, the FINE ARTS, NATURAL HISTORY, AGRICULTURE and RURAL ECONOMY, ARTS AND SCIENCES, BIOGRAPHY, TRAVELS, &c.; all of which are illustrated by engravings, several hundred in number—some of which are from original drawings, made expressly for the Work; thus adding to the interest of the text, by a direct appeal to the eye, conveying a more vivid and accurate impression of the subject than could otherwise be given. Thus the title, "THE AMERICAN MISCELLANY," it has been the aim of the editor to sustain by the nature of its contents, comprising the several branches of general knowledge, fitted to supply the means of mental improvement and self-education. "For," says an eminent writer, "of all the amusements that can possibly be imagined for a hard-working man after his daily toil, or in its intervals, there is nothing like reading. It calls for no bodily exertion, of which he has already had enough, or perhaps too much. It relieves his home of its dulness and sameness. It transports him into a livelier and gayer, and more diversified

and interesting scene ; and, while he enjoys himself there, he may forget the evils of the present moment, with the great advantage of finding himself the next day with the money in his pocket, or at least laid out in real necessities and comforts for himself and family, and without a headache. Nay, it accompanies him to his next day's work, and, if what he had been reading be anything above the idlest and lightest, gives him something to think of, besides the mere mechanical drudgery of his every-day occupation—something he can enjoy while absent, and look forward to with pleasure. If I were to pray for a taste which should stand me instead, under every variety of circumstances, and be a source of happiness and cheerfulness to me through life, and a shield against its ills, however things might go amiss and the world frown upon me, it would be a taste for reading."

The cordial welcome with which his former Works have been received, and their widely-extended popularity, induce the editor to cherish the hope that the present volume will be favored with a reception no less flattering to his efforts. In the sincere aim to present a volume of solid, instructive, and entertaining reading, fraught with a direct moral and religious tendency, and thus adapted to improve the heart while it instructs the head—a volume especially suited to the domestic circle, he can not but feel conscious that his labors have in some sort deserved this compliment

TABLE OF CONTENTS.

Agricultural Science.....	PAGE 140	Extent of the United States.....	PAGE 39
Allatons' Aphorisms.....	415	Fall of Babylon.....	279
America.....	138	Frankness and Reserve.....	294
American Continent.....	174	Genius superior to the Sword.....	647
American Scenery.....	270	Girard College for Orphans.....	471
Amherst College, with new Cabinet and Ob- servatory.....	488	Gold and Silver Mines of Mexico.....	94
Ancient Use of Elephants in War.....	115	Government of the Temper.....	336
Ancient Wine-Press.....	131	Guardian Angel.....	124
Astronomy, Lectures on.....	72, 119, 185, 209, 232, 315	Gutta Serena.....	239
Beauty of a Benevolent Life.....	159	Habits of the Roman Ladies.....	379
Belem or Para.....	250	Headstone.....	289
Biography of John Winthrop, First Gov- ernor of Massachusetts.....	178	Hindoo Scholar.....	144
Biography of Hon. Robert C. Winthrop.....	425	Hotel de Ville, Paris.....	476
Biography of Rev Spencer H. Cone.....	499	House of Rothschild.....	388
Blankets.....	32	How to Live.....	247
Books—their Publication and Circulation.....	78	How to make Steel.....	96
Bo-Peep.....	80	Importance of Self-Knowledge.....	243
Boston Common.....	52	Independence and Accumulation.....	370
Boston Custom House.....	396	Independence Hall, Philadelphia.....	484
Boston Water-Works.....	494	Indian Child's Grave.....	482
Boundlessness of the Material Universe.....	108	Indian Lock.....	247
Bounties of Nature.....	85	Indians in Oregon.....	283
Bounties of Providence.....	329	Infant Education.....	382
Bowling Green.....	496	John Hampden.....	501
Burial Places and Funeral Rights.....	23	John Hancock.....	16
Burying a Priest in Siam.....	386	John Winthrop, First Governor of Conne- cticut.....	369
Burying Beetle.....	446	Kindness and Censoriousness.....	113
Catacombs of Paris.....	478	Landing of Winthrop, and Settlement of Boston.....	462
Christmas in Germany.....	33	Law of Kindness.....	308
Christopher Columbus, and the Discovery of America.....	342	Lindley Murray.....	300
Church of St. Gudule, Brussels.....	218	Literature of China.....	280
Cincinnati.....	418	Literature of the Jews.....	246
Cod-Fishery.....	111	London Gin Palace.....	135
Commerce and Intellectual Eminence.....	328	Lycurgus, the Spartan Lawgiver.....	144
Consolations.....	96	Mammon and Mankind.....	15
Cotton-Bleaching.....	240	Marriage.....	255
Courtship.....	202	Massachusetts State House.....	330
Croton Aqueduct, New York.....	411	Memoir of Louis Philippe.....	226
Cultivation of the Mind.....	157	Memory.....	487
Curious Clock.....	288	Mercantile Biography.....	450
Curiosities of Arithmetic.....	256	Merchants' Exchange, New York.....	474
Curiosities of Art.....	398	Mexico.....	205
Curiosities of Science.....	80	Migrations of Birds.....	285
Customhouse at Philadelphia.....	35	Moral Character of the Monkey.....	183
Dead Sea.....	77	Mutual Dependence.....	14
Diamonds.....	126	Mutual Instruction Classes.....	93
Divisions of the Globe.....	278	Natural Theology.....	291
Duties of Sisters and Brothers.....	102	Neapolitans on the Seashore.....	106
Early Pleasure.....	442	Nests of Fishes.....	148
England to America, Address of Rev. Thos. Timpson.....	258	New England Liberality, Schools, and In- stitutions.....	20
English Language.....	287	New Houses of Parliament.....	492
Esquimaux Indians.....	214	New Year's Day.....	11
Exercise for the Eyes.....	368	New Zealand.....	163
Expulsion of the Acadians.....	138	Niagara Falls.....	54, 72
		Noah Worcester, the American Apostle of Peace.....	88

Night	PAGE 130	S. P. Q. R.—the Roman Standard.....	PAGE 324
Old City Hall in New York.....	298	Steubenville, Ohio.....	67
Oregon.....	338	Switzerland.....	199
Our Country.....	7	Tears.....	391
Our Parents.....	415	The Head and the Heart.....	38
Peace Societies.....	321	The Lama.....	149
Philosophy of a Tear.....	92	The Malays.....	394
Pilgrim Fathers.....	419	The Niger.....	269
Pittsburgh.....	447	The Publication and Circulation of Books..	78
Plan for Emancipation.....	47	The Seen and the Unseen.....	334
Popular Taste.....	424	The Self-Tormentors.....	250
Power of Music.....	193	Trajan and Robert Fulton.....	267
Progress.....	306	Travels in the Holy Land...40, 58, 98, 150, 185	
Public Libraries in Constantinople.....	292	Tyre.....	203
Rambling Essay upon Rooms.....	372	Vegetable Curiosities.....	223
Remedies against Moths.....	95	Viaduct over the Patuxent River.....	86
Reserches on Food.....	141	Visitations of Pestilence.....	441
Russia.....	198, 206, 406	Visit to Venice.....	218
Saint Pauls Church, New York.....	312	Washington National Monument.....	431
Saint Petersburg.....	264	Oration of Hon. R. C. Winthrop.....	433
Saint Thomas, West Indies.....	240	Washington's Residence at New York.....	69
Scenery in England.....	480	Wasp Family.....	160
Secret of Success.....	296	Western Emigrant.....	138
Self-Government.....	266	Western Scenery.....	324
Shakers of New Lebanon.....	132	West Point.....	378
Ship-Anchorage at Whampoa, China.....	304	Whitfield and Wesley.....	82
Sierra Leone, Western Africa.....	172	Window Gardening.....	83
Smithsonian Institute.....	442	Winslow House, Marshfield.....	472
Snow, its Nature, Formation, and Uses.....	455	Winter Not Monotonous.....	105
Social Influence.....	134	Winthrop Monument.....	457
Solar System.....	130	Woman.....	66, 454
Sons of the Ocean.....	332	Youth and Age.....	409
Sovereigns of Europe.....	183	Zoophytes, or Plant Animals.....	249

EMBELLISHMENTS.

Design for a Monument to the Memory of Governor Winthrop.....	FRONTISPIECE	View of Steubenville, Ohio.....	68
New Year's Day—"The Compliments of the Season".....	PAGE 13	Niagara Falls viewed from the Clifton House.....	73
Portrait of John Hancock, with a Fac-Simile of his Signature, copied from the Declaration of Independence.....	16	The Dead Sea.....	77
The Hancock House, Boston.....	17	Bo-Peep.....	81
Egyptian Funeral Procession.....	17	Viaduct over the Patuxent, on the Baltimore and Washington Railroad.....	87
Mummy-Cases and Marble Sarcophagi.....	24	Jerusalem from the Mount of Olives.....	97
Tombs of the Kings of Golconda.....	26	Pool of Siloam.....	98
Embalming.—The Processes of Bandaging and ancient Egyptian Monuments.....	27	Part of the Valley of Jehosaphat, and Entrance to Jerusalem.....	99
Painting an embalmed Body: designed from the Tomb of Hyder Ali.....	28	Garden of Gethsemane.....	106
Morrell of Owhyee.....	29	Neapolitans on the Seashore.....	107
Luther and his Family, with their Christmas tree.....	31	Ancient Use of Elephants in War.....	115
Custom House, Philadelphia—(formerly the United States Bank).....	34	Elephants destroying Captives taken in War.....	117
Oriental mode of Traveling.....	37	Army on a March, with Elephants.....	118
Camels loading preparatory to starting.....	40	The Guardian Angel.....	123
An Encampment.....	41	Illustration of Diamonds.....	126
Hebron.....	42	The Pioneer of the Western Forest.....	131
Bethlehem.....	43	The Hindoo Scholar.....	137
Jerusalem, with its Walls—a northwest View.....	44	Defile between Jerusalem and Jericho.....	145
Convent erected on what Tradition affirms to be the Cave of the Nativity.....	45	Ruins of Jericho.....	151
Tomb of Rachel.....	46	The Plain of Jericho.....	153
The Boston Common, with the State House in the Distance.....	53	The River Jordan.....	154
View of Niagara Falls below Table Rock.....	55	A party of Missionaries crossing a Swamp in New Zealand.....	164
The Mosque of Omar, Jerusalem—on Mount Moriah, where the Temple of Solomon stood.....	57	Part of Regent's Town, a Settlement of liberated Negroes in the Colony of Sierra Leone.....	173
The Mount of Olives.....	59	Regent's Town, from the Governor's House.....	175
A Street in Jerusalem.....	60	Portrait of John Winthrop, Founder of the City of Boston, and first Governor of Massachusetts.....	177
Jews' Place of Walling—Temple Wall.....	61	The Death-Bed of Winthrop.....	181
		Present appearance of Jerusalem.....	185
		Terrace Cultivation.....	186
		Mounts Ebal and Gerizim.....	187
		Mount Carmel.....	190

the Roman Standard.....	PAGE 324
Ohio.....	67
.....	199
.....	391
the Heart.....	38
.....	149
.....	394
.....	269
and Circulation of Books.....	78
the Unseen.....	334
ntors.....	250
ert Fulton.....	287
Holy Land.....	40, 58, 98, 150, 185
.....	203
.....	223
the Patuxent River.....	86
Pestilence.....	441
.....	218
ational Monument.....	431
Hon. R. C. Winthrop.....	493
Residence at New York.....	69
.....	160
ant.....	138
.....	324
.....	378
Vesley.....	82
ning.....	83
Marshfield.....	472
etionous.....	105
ment.....	457
.....	86, 454
ant Animals.....	409
.....	249

S.

le, Ohio.....	68
ed from the Clifton House.....	73
.....	77
.....	81
.....	87
.....	97
Mount of Olives.....	96
.....	98
.....	100
.....	100
.....	107
.....	115
.....	117
.....	118
.....	125
.....	131
.....	137
.....	145
.....	151
.....	159
.....	153
.....	154
.....	164
.....	173
.....	175
.....	177
.....	181
.....	185
.....	186
.....	187
.....	190

CONTENTS.

7

View of Nazareth.....	PAGE 191
Promontory of Mount Carmel.....	199
View of Zurich, Switzerland.....	201
Winter Traveling—Russian Courier.....	207
Palpit of St. Gudule, Brussels.....	217
The Bridge Hotel, Newhaven.....	229
Louis Philippe landing at Newhaven.....	231
Louis Philippe and his Party at Breakfast at the Bridge Inn, Newhaven.....	241
St. Thomas, West Indies, from Wright's Wharf.....	247
Indian (Hindoo) Lock, in the Form of a Bird.....	251
View of Belem, or Para, on the Amazon River.....	257
Portrait of Rev. Thomas Timpson, of London.....	263
Portrait of a Chinese Bookseller.....	269
Mountains and Market-Canoes, near Bokweh, on the Niger, West Africa.....	271
Eulchazar's Feast—Daniel interpreting the Hand-writing on the Wall.....	280
The Fall of Babylon.....	283
Clock constructed by Isaac Habrecht, A. D. 1599.....	288
Interior of the Public Library at Constantinople.....	298
View of the old City Hall, Wall St., New York.....	297
Ship-Anchorage at Whampoa, China.....	305
St. Paul's Church, and Astor House, New York.....	313
The Roman Standards, "S. P. Q. R.".....	324
View of the State House, Boston.....	331
Oregon City, on the Willamette River.....	337
Portrait of Christopher Columbus.....	347
Columbus before the Council of Salamanca.....	347
Columbus quelling the Mutiny on board the Santa Maria.....	349
Columbus taking Possession of the New World.....	351
Portrait of John Winthrop, first Governor of Connecticut.....	359
The Tomb of Koculsko, at W. Point.....	PAGE 377
Burning a Priest at Tavoy, Siam.....	387
View of the Custom House at Boston.....	397
Cronstadt, "the Town of the Crown," Russia.....	408
View of Cincinnati, from the Ohio.....	417
First Settlement of Boston.....	427
View of the Washington National Monument.....	431
View of the Smithsonian Institute, Washington.....	443
View of Pittsburgh, from the Northwest.....	449
Landing of Governor Winthrop at Salem, 1630.....	461
The early Settlers of Boston traveling through the Wilderness.....	463
View of Trimountain, c. Boston, in 1639.....	466
Map of Boston and Vicinity, in 1657.....	469
View of Boston, in 1776, taken from the Road to Dorchester.....	471
View of Girard College, Philadelphia.....	473
The old Winalow House, Marshfield, Mass.....	478
The Merchants' Exchange, Wall St., New York.....	477
View of the Hotel de Ville, Paris.....	483
Indian Parents at their Children's Grave.....	483
The old State House, or Hall of Independence, at Philadelphia—Walnut Street Front.....	484
Front view of the old State House, Chestnut Street.....	488
View of Amherst College, with the new Cabinet and Observatory, from the Southwest.....	489
View of the New Houses of Parliament.....	493
View of the New York Bowling-Green.....	497
View of John Hampden's Residence.....	501
View of Hampden's Monument.....	508
Hindoo God Krishna, on an Elephant, composed of male Attendants.....	506
The B.....	510

CONTENTS.

VOLUME II.

Adams' Peak, Ceylon.....	529
Advantages of a Book.....	531
Alexander the Great.....	757
Algiers.....	725
Alphabetical Writings.....	931
American Aborigines.....	610
Anecdotes of Washington and Morris.....	790
Animal Humanity.....	1022
Animal Language.....	901
Appearances of Design in Creation.....	938
April.....	698
Articles of Dress.....	700
Auscultation.....	597
Autobiography.....	556
August.....	882
Averice.....	785
Bargain-Hunters.....	1018
Bay-Tree, the.....	589
Bas-Rock.....	670
Before and after Dinner.....	863
Benjamin West.....	618
Be Industrious.....	756
Bible, concise History of the.....	1018
Birds of Paradise.....	760
Birds, Utility of.....	735
Bison, the.....	740
Black and Grey Squirrels.....	544
Bordeaux.....	1011
Bottle Tit and Nest.....	528
Botanic Gardens at Brussels.....	662
Boa Constrictor, the.....	969
Bright Side of Humanity.....	953
Burrowing Owl and Prairie Dog.....	522
Carnival at Rome.....	536
Castle Howard, England.....	766
Cataract in Iceland.....	761
Cathedral of Florence.....	547
Causes of the American Revolution.....	891
Causes of the French Revolution.....	794
Cereopsis of New Holland.....	595
Chamois-Hunting.....	650
Chatham, Lord.....	965
Chetah, or Hunting Leopard.....	1006
China and the Chinese.....	591
Cicero.....	835
Classification of Rocks.....	830
City of York.....	917
Colonization of Greenland.....	733
Cologne, City of.....	866
Commerce.....	738
Commonplace, the.....	1002
Constancy of Nature.....	980
Courtesy.....	950
Cromwell, Oliver.....	885
Cross Folks.....	525
Curious Facts about the Spider.....	894
Death of General Wolfe.....	954
Death of Little Children.....	994
December.....	1005
Description of Texas.....	669
Discipline of the Eyes.....	576
Dress, Articles of.....	700
Dripping Well at Knaresborough.....	601
Duties to Society, &c.....	1019

Dyspepsia.....	PAGE 644	Life without an Aim.....	PAGE 1004
Earthquakes.....	821	Light from Flowers.....	634
Echoes.....	701	Longevity.....	541
Emulation.....	956	Love of Life.....	712
End of Four Great Men.....	1024	Love of Nature.....	880
Evaporation, Facts in.....	548	Luxor Obelisk.....	983
Eye, the.....	860	Lynx, the.....	938
Fair of Reykjavik.....	854	Macaroni Eaters.....	693
Fallacy of Proverbs.....	587	Mania, the.....	592
Falls of Toccoa, Georgia.....	616	March.....	649
Falsehood.....	811	Marseilles.....	1016
February.....	588	Massacre of the Mamelukes.....	604
Fireplace, History of.....	808	Mastodon Race, the.....	825
Fireside Musings.....	739	May.....	739
Firmness of Character.....	893	Memory.....	799
Food of Man.....	974	Mental Discipline.....	844
Form and structure of the Earth.....	778	Metaphysics of Business.....	988
Franklin, Character of.....	563	Mexico, City of.....	983
Freedom of the Mind.....	1011	Mind, the, Beyond the Grave.....	633
Friendship.....	884	Mirage, the.....	791
Gathering Olives.....	913	Mississippi and the Nile.....	650
Gems of Thought.....	971	Mocking-Bird, the.....	634
Genoa.....	787	Mohammedan Devotions.....	878
Geology, its Objects, &c.....	743	Moment of Success.....	638
Geology, Organic Remains, &c.....	868	Motives.....	601
Gibraltar.....	583	Mountains.....	986
Gigantic Birds of Old.....	749	Mourning Woman of the East.....	948
Gleaners of the Pontine Marshes.....	895	Muscular Strength.....	696
Glengarriff.....	797	Music.....	693, 727
Grandeur of God.....	570	Mysteries of Creation, the.....	789
Greenland, Colonization of.....	733	Narwal, the.....	783
Greenwich Observatory.....	655	National Gallery of England.....	1020
Grotto of Neptune, at Tivoli.....	619	Nauplia.....	629
Grotto at Adelsburg.....	640	Neapolitan Peasants.....	693
Grouse of Europe.....	709	Nelson, Monument to.....	830
Gnu, the.....	954	Newfoundland Dog, the.....	926
Habit of Observation.....	1015	New Zealand.....	747
Halls of the Montezumas.....	905	No Person Unimportant.....	1031
Heart, the.....	936	November.....	993
History of the Fireplace.....	808	Number Seven, the.....	842
History.....	562, 835	Oak-Bark Peelers.....	898
Home.....	854	Obelisk of Luxor.....	983
Honor and Truth.....	896	Oberhasli.....	531
Hope.....	766	Ocelot, the.....	923
Horology.....	1024	October.....	925
Horses.....	928	Old Billop House.....	613
How to get Rich.....	579	Oporto, Portugal.....	769
Human Body, the.....	753	Orange-Tree, the.....	558
Humorous People.....	632	Origin of American Aborigines.....	610
Improvisatore, the.....	809	Ottor, the.....	774
Incidents in the Life of Washington.....	672	Palisades, the.....	539
Intolerance.....	877	Pampas, the.....	851
Iron Age, the.....	627	Paris at the Present Day.....	686
Island of Capri.....	571	Parks of England.....	906
January.....	551	Pathway of Science.....	645
Jugglers of India.....	606	Pericles.....	980
June.....	777	Peruvians, the.....	822
Kara Hissar.....	778	Persistency of Family Features.....	679
Kinkajou, the.....	667	Respiratory Tubes of the Skin.....	663
Lago Maggiore.....	861	Petrified Cascade, &c.....	996
Lammergeyer, or Bearded Vulture.....	991	Philosophy of Mystery.....	946
Landing of Julius Cæsar, &c.....	624	Phosphorus.....	581
Last Look, the.....	594	Piasan Rock.....	665
Leeds Castle.....	684	Plato.....	802
Length of Days.....	964	Pleasure after Pain.....	915
Life-Boat, the.....	552	Polar Bear, the.....	873

Pompeii and Herculaneum.....	PAGE 520	Spectacles	PAGE 1033
Pope's Tree	522	Spider, Curious Facts about.....	894
Porpoise, the.....	526	Springer Antelope.....	688
Power of Kindness.....	527	Squirrels, Black and Grey.....	544
Power of the Voice.....	546	Star Worship.....	534
Progress of African Discovery.....	815	Stray Thoughts on the Beautiful	998
Prospects of the United States.....	755	Study a Child's Capacities.....	773
Protection from Lightning.....	764	Swordfish, the.....	840
Presence of Mind.....	690	Tenacity of Life.....	538
Pride, Offensive and Defensive.....	564	Texas, Description of	689
Pulse, the.....	699	Thoughts and Things.....	776
Rational Religion.....	983	Thoughts on Winter.....	1000
Real Greatness.....	953	Traveling in the East.....	845
Recreations in Natural History.....	617	Truth	615
Regalia of the British Crown.....	646	United States, Prospects of	755
Reign of Terror.....	703	Upright, Downright, and Straightforward.....	516
Reindeer, the.....	891	Uses of Things.....	599
Reproduction of Plants.....	657	Utility of Birds.....	735
Resuscitation.....	662	Vegetable Kingdom.....	908
Retrospection.....	682	Venice.....	714
Rotterdam.....	933	Visions of Good Men.....	650
Rules about the Weather.....	725	Walrus, the.....	608
Sabbath Thoughts.....	763	Washington, George.....	967
Salt-Mines of Cardona.....	697	Weather, Rules about.....	725
Science of the Scriptures.....	1008	West, Benjamin.....	518
Scraps of Curious Information.....	1023	Whale and Whale-Fishery.....	672
Scriptural Allusions to Dew	972	White or Barn Owl.....	858
Sebastian Cabot.....	661	Weisbaden.....	736
Servitude.....	621	Wife of Lafayette.....	876
September	898	Wild-Turkey, the.....	566
Shaddock-Tree, the.....	581	Wolsthorpe Manor-House	805
Shaking Hands.....	603	World, the.....	703
Sorrow for the Dead.....	844	York, City of.....	917

EMBELLISHMENTS.

The Falls of Toccoa.....	513	The Regalia of England, used at Coronations.....	641
The Family of Benjamin West.....	519	Hunting the Chamols.....	651
Burrowing Owls and Prairie Dogs.....	523	View of the Observatory at Greenwich, England.....	654
The Porpoise.....	527	Portrait of Sebastian Cabot.....	661
Male and Female Bottle Tit and Nest	529	Jardin Botanique, Brussels.....	669
Pass of Oberhasli.....	532	The Kinkajou.....	674
Carnival at Rome.....	537	View of the Bass-Rock.....	677
The Palisades, Hudson River.....	540	Harpooning the Whale in the Arctic Seas.....	677
Black and Gray Squirrels.....	545	Dangers of the Whale-Fishery.....	683
The Cathedral of Florence.....	549	Pope's Tree at Hinfeld, Berks.....	685
Preparing to launch the Life-Boat.....	553	Leeds Castle, Kent.....	689
The Life-Boat in a Storm.....	555	Hunting the Springbok, at the Cape of Good Hope.....	694
Seville Orange Tree.....	561	The Macaroni Sellers of Naples.....	696
Portrait of Benjamin Franklin.....	563	The Salt-Hills of Cardona, in Catalonia.....	709
Wild Turkey.....	567	Capercaillie, or Cock of the Wood.....	711
Island of Capri.....	575	Venice.....	715
Caverna Ayarra, in the Island of Capri.....	575	The Rialto.....	719
Shaddock Tree.....	580	Gondola, with single Rower.....	722
The Rock of Gibraltar.....	584	The Ocelot.....	724
Interior of the Rock of Gibraltar.....	586	City of Algiers.....	727
Bay Tree.....	590	Interior of an Esquimaux House, at Frederikshaab, Greenland.....	734
Long and Short-Tailed Manis.....	593	Public Rooms at Wiesbaden.....	737
Ceropepis and Young.....	596	The American Bison.....	741
Drooping Well at Yareborough.....	599	Canoe and Natives, off Cape Wargari, New Zealand.....	748
Mohammad Ali, witnessing the Massacre of the Mamelukes.....	605	Cataract at Fessvollum, Iceland.....	752
Walruses.....	609	Portrait of Alexander the Great.....	757
View of the Old Billip House, at Bentley, Staten Island.....	619	Birds of Paradise—1. The Emerald; 2. The Sillit; 3. The Incomparable; 4. The Cloudy; 5. The Superb.....	761
The Aye-Aye, <i>Chiromys Madagascariensis</i>	616	South Front of Castle Howard, Yorkshire, England.....	767
View of Falls of the Anio, at Tivoli.....	620	Oporto, Portugal.....	771
Landing of Julius Caesar in England.....	625	The Otter.....	775
Napoli di Romania.....	631	Asoum Kara Hisar, or the Black Castle of Opium.....	779
The Mocking-Bird.....	635		
View of the Entrance to the Cavern of Adelsberg.....	641		
Grotto of the Maddalena, at Adelsberg.....	643		

Spearing the Norwal.....	PAGE 784	St. James's Park, London.....	PAGE 907
City and Harbor of Genoa.....	788	Hyde Park—Entrance from Piccadilly.....	909
Mirage in the Plains of Mexico.....	792	Gathering Olives.....	914
Bay of Glengarriff, in Ireland.....	798	View of the City of York.....	918
Plato (from an antique bust).....	803	View of the West Front of York Minster.....	920
Portrait of Sir Isaac Newton.....	805	Interior of the Choir of York Minster.....	922
Sir Isaac Newton's Birthplace.....	807	Newfoundland Dog.....	927
The Neapolitan Improvisators.....	810	View of Adam's Peak.....	930
Junction of the Rivers Tehuacua and Quorra.....	817	Rotterdam—showing the Church of St. Lawrence.....	934
Interior of the Temple of the Sun, at Ouseo.....	823	Lynxes.....	939
Oreian or Wallachian Sheep.....	827	Herd of Gnus.....	949
Monument to Nelson, Yarmouth.....	831	Mourning Women of the East.....	955
Cicero (from an antique Bust).....	836	Death of General Wolfe.....	961
The Swordfish.....	841	Bust of Pericles.....	963
Oriental Women on Camels.....	845	Portrait of William Pitt—Lord Chatham.....	970
An Encampment of Pilgrims.....	848	Attack of a Boa Constrictor on a Sleeping Lascar.....	975
Ancient City of Antioch.....	850	Glasgow, with Stockwell Bridge from the South.....	977
March of a Caravan.....	855	Bank.....	979
Islanders arriving from the Interior at the Fair at Reykjavik.....	859	New Broomielaw Bridge, Glasgow.....	985
White or Barn Owl.....	868	Glasgow Exchange.....	988
View on the Lago Maggiore, from the Inn Bavero.....	867	Obelisk of Luxor, Place Louis XVI., Paris.....	998
Church of St. Martin, Cologne.....	874	The Lammergeyer, or Bearded Vulture.....	997
Polar Bears and Seals.....	879	The Petrified Cascade of Fanboub Kalesi.....	1007
An Oratory or Place of Prayer.....	883	The Chetah, or Hunting Leopard.....	1012
Portrait of Oliver Cromwell.....	889	Bordeaux, and Bridge over the Garonne.....	1017
Cromwell dissolving the Long Parliament.....	893	Port of Marseilles.....	1021
Milking the Reindeer.....	897	View of the National Gallery in London.....	1025, 1026
Gleaners of the Pontine Marshes.....	900	Sun Dial (Six Illustrations).....	1027
Peeling the Bark from the Oak.....		Clepsydra.....	1036
		Mechanism of a common Watch.....	1039

.....PAGE	907
cadilly.....	909
.....	914
rk Minister.....	918
.....	920
.....	921
.....	927
.....	930
h of St. Lawrence.....	934
.....	939
.....	945
.....	949
.....	955
.....	961
Chatham.....	965
a Sleeping Lascar.....	970
je from the South.....	975
.....	977
.....	979
VI., Paris.....	985
Culture.....	990
uk Kales.....	997
.....	1007
Garonne.....	1019
.....	1017
London.....	1021
.....	1025, 1026
.....	1027
.....	1029

INTRODUCTION.

THERE are few enjoyments more rational, more congenial to an unvitiated taste, or more subservient to the moral faculties of human intelligence, than the practice of judicious reading. By it we may sit by our fireside, and hold converse with the patriarchs, sages, and prophets of hoary antiquity. Through its medium we can partake of and imbibe the sentiments of the fathers of science, philosophy, and religion; for the page of history holds a secret but powerful language, full of meaning, full of knowledge and wise precepts, portrayed in either the beauties of virtue or the deformities of vice. While the individual devoid of a taste for reading, wanders on amid the glowing beauties of the mental creation,—a mere automaton—propelled only by the propensities of his animal nature, trampling the loveliest flowers beneath his feet, nor appreciates the sweet perfumes exhaled by the mutilated plants—the man of reading and reflection, taught by the wisdom of that Creator whom he knows through the medium of his intellectual cultivation, sees in everything around him, something to admire, something to charm him, and something to adore. He gathers from every hedge along the pathway of his existence, innumerable flowers, whose beauties garnish his tabernacle, and whose perfume will ascend as grateful incense to Heaven, from the margin of the grave. While the views, meditations, and hopes of the unread man are circumscribed within the narrow limits of his own existence, and he looks back, in the volume of the past, no farther than the few brief chapters that have been recorded since his infancy, and in the future his vision terminates at that point where the soul puts off its mortality—the enlightened reader, fraught with the knowledge which books and concomitant meditation impart, views his own life as merely a faint speck within the area of his mental vision, and upon the wings of imagination he travels back to the matin of creation, when “the morning stars sang together, and the sons of God shouted for joy.” He sits upon the apex of a great eminence, whence he beholds a panoramic view of the world, from the transactions in the garden of Eden to the present moment. In the political horizon, he observes the patriarchal power and petty sovereignties disappear at the approach of absolute and extended monarchy, and the whole earth governed by four great rulers. Again he sees these monarchies, weakened by luxury and grown unwieldy by conquest, falling by their own weight, and out of their ruins smaller monarchies appearing. These, in their turn, are seen to give way to a mightier, a more liberal and enlightened, and, we trust, a more enduring principle in political government—that of **THE REPUBLIC**! Thus he sees power after power alternately destroying and destroyed, and watches, with intense interest, the progress of events, which, operating upon each other in accordance with a great design, have produced the eminently-promising political, social, and religious condition of the world at this eventful period of its history. Thus may the student also watch the successive revolutions in the great empire of mind; and while he reads the history of men and nations, he may treasure up lessons of wisdom, upon which his country may make large draughts in the hour of peril.

This country is pre-eminently distinguished for the facilities afforded for the diffusion of knowledge among all classes of the people. In addition to the admirable system of free schools which universally prevails, and the instruction in the higher seminaries of learning to be everywhere had at a mere nominal cost, there are more books, reviews, magazines, and newspapers, published here, than, it might almost be said, in the whole world besides. There being no onerous duties imposed upon them, no laws restricting or limiting their circulation, and they being consequently furnished at comparatively low prices, there is scarcely

a family in the land, however humble its circumstances, but may have its library, upon which its members can draw for instruction or recreation during their leisure hours. The benefits resulting from this are seen in the superior intelligence of people in the common walks of life here, in comparison with the humbler classes in other lands.

But, however flattering to the national pride this may be, we are compelled in truth to admit, these inestimable privileges, in both publishing and reading, are, to by far too great an extent, lamentably abused. Any person who takes a comprehensive view of the quantities of worse than worthless matter, under the name of "light literature," daily thrown before the public, and which forms the intellectual food of so great a proportion of the community at the present day, will inevitably arrive at this conclusion. The prolific press so overflows with romances, novels, and magazines and newspapers, filled with visionary scenes, that the public taste in reading has been seriously vitiated. The imagination, ever susceptible to high-wrought pictures of romantic adventure, when improperly indulged, "grows by what it feeds on," till it outstrips every other mental power. To this may be attributed, in a great degree, the credulity too often exhibited, and the tendency to be drawn into impracticable schemes and romantic speculations. An instance may perhaps be found in the eagerness with which, at the present time, thousands, excited by the glowing descriptions and extravagant stories almost daily published, of immense treasures to be found in the new El Dorado of the Pacific, are leaving friends, family, all the comforts and endearments of home—many relinquishing a safe and profitable business—and embarking on a long and perilous voyage, bound for the "gold regions," with hopes buoyant, but which we fear will result, with very many—not in disappointment merely (the moral taught might compensate for that)—but in the loss of health and perhaps of life itself. Facts, the naked realities of life, are too tame to arrest the attention. They must be clothed or distorted in fiction, before they will possess sufficient interest for perusal. Many a magazine and newspaper, which has dealt principally with matters of science and fact, has failed of adequate support; while others, which are filled with fictitious and unnatural tales, romantic incidents, and sickly poetry, riot in abundance.

To lend the aid of our humble endeavors in turning this current of taste in reading, thus tending to the broad waste of mental licentiousness, into a healthier channel, has been our controlling motive in putting forth this volume, as it has been of the entire series of publications which have from time to time been issued by us. In the preparation of this work, everything which might have an improper tendency has been carefully excluded. Nor has the design been a negative one merely; care has also been taken that every article which found admission to its pages should possess a positive value—should impart some useful information, or "point a moral." The illustrations have been selected with the same design. Many of them are from original sketches, procured with considerable trouble and expense. To avoid prolixity, and to give as great a variety as possible, the articles have generally been of as limited length as was compatible with justice to the subjects upon which they treated. There were a few exceptions, however, where the importance of the matters treated, warranted and required more scope. Among these we would instance, "CHRISTOPHER COLUMBUS, AND THE DISCOVERY OF AMERICA." When it is taken into consideration, that, without the omission of a single important fact, we have here, condensed into twenty-six pages, the substance of several octavo volumes, by one of the most eminent writers of the present day—a scholar of whom our country may justly be proud—we are confident that it will not be deemed as absorbing too great a space. We feel assured, also, that no one can rise from the perusal of this description of the labors and trials of Columbus without a feeling—not simply of admiration of the hardy adventurer, who, with desperate resolution, launched forth on the Atlantic, hoping against hope, to discover he knew not what—but, of reverence for the philosophic truth-seeker, who, from the accumulated testimony of ages, in the proud independence of conscious genius, moulded a most refined yet demonstrable theory of geographical facts;—and whose mind, when he set sail from Europe, was so deeply impressed with the weight of historical evidence, that he proceeded with confidence and certainty on the voyage which resulted in the discovery of a New World.

There are many other subjects treated on, which will be found of more than ordinary interest, but our limits will not permit a reference to them in detail. It is hoped that this volume may be found in a measure worthy of that approval by the public which has been so generously accorded to our previous works. And should its publication tend, even in a slight degree, to encourage a more judicious and salutary taste in reading, we shall feel that we have not labored in vain.

AMERICAN MISCELLANY.

OUR COUNTRY.

THE pilgrim fathers were conducted to these shores by an Almighty Hand. They might have passed to other lands, far from the aggressors, and been safe. *There were countries nearer home that would have gladly welcomed them to their shelters.* BUT A MYSTERIOUS INFLUENCE RESTED UPON THEIR MINDS; AND, ALTHOUGH IT WAS A HAZARDOUS ENTERPRISE, TEEMING WITH DANGER, THEY RALLIED THEIR BROKEN SPIRITS, BRAVED THE WINDS OF HEAVEN, THE STORMS OF THE ANGRY DEEP, AND, IN HOPE AGAINST HOPE, IN THE VERT DEPTH OF WINTER, SPRANG UPON THE RUGGED ROCK OF PLYMOUTH, BEARING WITH THEM THE SEEDS OF A HOLY RELIGION AND A VAST EMPIRE.

Their origin and national character form a striking circumstance in the history of the country. They were of no plebeian race, neither were they all of high patrician birth; but generally selected from that class, which, in England especially, constitutes the very best and most enterprising of her citizens. They were inflexible, brave, and true. Independence of mind, a fearless spirit, with an unparalleled strength of purpose, were characteristics by which they were distinguished. Another and a far different race might have been our fathers; but God had high and important purposes in view, and he therefore selected men who possessed the power and were furnished with the materials to lay the deep and broad foundations of a nation, destined to be unexampled and glorious.

The nature of the constitutions and laws they framed and adopted, their moral tendency, the strictness of their religious sentiments, all give evidence of an overruling Providence. Had the laws by which they were governed been less rigid and severe, their morals more pliable, and their faith cast in a more polished mould, it is a question whether their children would have retained, for so many years, customs and manners, which, though antiquated, and ridiculed by the refined and skeptical,

have contributed in a great measure to preserve the American citizen, as yet, from many of the glaring absurdities and extravagant notions of his trans-atlantic brethren. On the whole, we may consider the character of the Pilgrims, their conduct and views, as not only beneficial, but absolutely necessary, in a religious, moral, and political point of light, in forming the basis of a great and highly intelligent community.

Their preservation from the scalping-knife of the savage and from the sword of France, is another mark of Divine favor. No personal bravery, no tower of strength, could have secured them from the accumulated dangers that beset them. The country was then covered with thousands of the red warriors, armed and on the watch for their prey, urged on by Frenchmen who thirsted for blood. Early in their history we also mark a gracious interposition of Divine Providence, in the discomfiture and defeat of a powerful armament. Ere it had reached these shores, the Lord commissioned the elements to fight against it, and the proud fleet was scattered, dismasted, and broken by the four winds.

And when the seeds of war sprang up in the breasts of the revolutionary heroes, were not the counsels of Great Britain strangely perplexed? The voice of wisdom forsook the senate and council-chamber, and the spirit of her king, her nobles, and her people, cowered to a palpably ignorant policy.

At this period, big with the destinies of millions, when all that is dear and valuable to man was at stake, and the hopes of America were on the point of being blasted for ever, the IMMORTAL WASHINGTON appeared on the arena of battle. A mysterious and all-wise Providence seemed to designate him as the ANGEL that was to lead the American armies to victory and conquest. He soon redeemed the pledge his opening campaign gave to a deeply anxious and troubled people. His course was brilliant and successful. He met the veterans of a hundred hard-fought fields, wearing the laurels of victory, and they were

signally beaten; the country rescued from the invader's sword, and its rights and privileges confirmed and acknowledged by the voice of nations and the wisdom of our fathers.

The framing of the constitution, that great pillar of our country's glory, is not among the least of the blessings by which these United States are distinguished.

But who can read the page that opens upon the fiftieth anniversary of our independence, and not be struck with astonishment at the death of the two venerable patriots, Jefferson and Adams, who were both, on the morning of that auspicious day, basking in the sunshine of a nation's smile; but, ere the sun had set, were gathered with their fathers?—who can pass over this imperishable mark of Divine interference, and not feel the full force of our observations?

The prosperity which has always crowned this country—more especially since her independence was established, is further proof that God is with us. She has increased in territory and in population, in riches, in enterprise, and renown. Her religious, literary, and political institutions will bear a proud comparison even with those of Great Britain, France, and Germany.

From what has been said, we may fairly infer that America is destined, at no distant period, to take a more elevated and important station in controlling the destinies of the earth. If she is but true to herself, she can never retrograde. She must ever prosper, gathering strength and stability as she advances. The Almighty seems to have determined in her favor. As long as the religion of Jesus is permitted to lie deeply-rooted in her institutions, she can not fall. The Rock of Ages is as yet her abiding-place. She is supported by pillars of strength and beauty, that suffer no decay, and that bid defiance to the hand of the oppressor, and the tooth of time. Stupendous are the purposes, to accomplish which, she is to be the honored instrument. In the youth and vigor of her days, untrammelled and unconfined, bearing in her bosom the elements that have already given omens of great promise, what may she not perform!

Her voice is swelling to a louder note in other lands, and wherever the star-gemmed banner sweeps the free air of heaven, there will her influence be felt, and the fame of her doings create a flame and arouse a spirit which rivers can not quench, nor armed multitudes subdue. The beacon of freedom to both hemispheres, its light will soon blaze on every island, sea, and mountain, on the globe, until myriads, guided by its mellow radiance, shall proclaim universal emancipation from chains and slavery, and man assume his legitimate place in the great scale of being.

A yet more glorious contemplation is afforded by this animating subject. For achievements of moral sublimity, never emulated nor surpassed since the commencement of time, America stands eminently conspicuous. Emanations that bear the royal signature of Heaven, cluster around us on every hand. Movements of a high and lofty import, which cast far into the shade all that has ever taken place on the earth since the hour of man's redemption, seem to be shaking the universe, and strongly intimate the near approach of wonderful events. Christians in former times waged war on the borders of the enemy's dominions only: their battles were but skirmishes. But their sons have resolved to penetrate the thickest ranks, and to attack the strongest fortresses; and they aim at nothing short of the complete overthrow and downfall of the empire of sin.

The resources of this country are vast, her spirit bold and daring, not easily subdued, and capable of great and brilliant enterprise. It is but natural then for us to place her in the front rank of the Sacramental Host—her stars pouring light on the millennial morning, while her spirit-waking trumpet shall break upon the ears of slumbering millions.

While we contemplate this magnificent scene, and behold the glorious prospect which the torch of inspiration reveals to our wondering eyes, let us fear and tremble, lest we interrupt the high purposes of the Almighty, and, by our rebellion and obstinacy, turn away the streams of his munificence. We may contribute to the downfall of these high and towering hopes, by becoming forgetful of his mercy, and setting at naught his counsel. Are there not already monitory voices in the land?—Do they not appeal to our hearts in the touching and emphatic language of nature, and of truth?

What says the history of the world, in regard to the evil to which we here allude? The national debt of England is at present about three thousand millions of dollars—a debt produced by war; the interest of that debt; and the parts of it already liquidated, amount to about ten times as much more. And what has England obtained for all this mighty outlay of capital? Where shall we look for the benefit which she has derived from this incalculable expense? Ask the depths of the ocean, and the sunken fleets of the Nile and Trafalgar will answer. She has gained the fame of making her lion roar on the vanquished Armada; of "letting slip her dogs of war" upon the palmy shores of Hindostan; of giving Wellington immortality upon the plains of Waterloo: and is this all? No! she has erected monuments in Westminster Abbey to the greatest butchers of our

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race that ever lived; it has written poverty upon the foreheads of the majority of her laborers; it has crushed the many with burdens and taxes to honor the destroyers of our race with a name—a name which, if society understood its interests as it ought, would only render its possessor detestable and contemptible. This is only the influence of war on national prosperity. Infinitely more disastrous is it in its consequences upon private, than upon public property; and infinitely more extensive. Whole navies can better be sunk in the ocean, than the poor man's house be burned over his head by an invading army. Wars add to national wealth! Wars increase national prosperity! Give us the money that has been spent in war, and we will purchase every foot of land upon the globe: we will clothe every man, woman, and child, in an attire that kings and queens might be proud of; we will build a schoolhouse upon every hillside, and upon every valley upon the habitable earth; we will supply that schoolhouse with a competent teacher; we will build an academy in every town, and endow it; a college in every state, and fill it with able professors; we will crown every hill with a church, consecrated to the promulgation of the gospel of peace; we will support in its pulpit an able teacher of righteousness; so that on every sabbath morning, the chime on one hill should answer to the chime on another, round the earth's broad circumference, and the voice of prayer, and the song of praise should ascend, like a universal halo, from earth to heaven; the darkness of ignorance should flee before the bright light of the sun of science: Paganism would be crushed by the fall of her temples—shaken to their deep foundations, by the voice of Truth; War would no more stalk over the earth, trampling under his giant foot all that is beautiful and lovely beneath the sky! This is not fancy; we wish it were: it reflects on men. It is the darkest chapter in human depravity, to squander God's richest blessings on passion and lust.

Who that has attentively viewed the relation of parties for the past few years, can but feel loathing and disgust for the conduct of the partisan press of the country? We admit, for the honor of human nature, that there are exceptions, and we take pleasure in recording the fact. But it is of the spirit of parties that we would especially speak—it is that state of things by which one man is favorably or unfavorably affected toward another, according to the degree of his supposed or known adherence to party. As a consequence, it has led to deep-seated personal animosity; it has given rise to clans or cliques, whose conduct has frequently caused the abandonment of

correct and sound principles; has caused the nomination of irresponsible men for responsible stations, whose only qualifications for official distinction were wholly based upon a blind adhesion to the mandates of party, thereby excluding from office the most worthy and best-educated men in our country. Look, for example, at any of the canvassings before any of our general elections—see how low in the scale of intellectual being those who have the management of parties descend—they exhibit very little disposition to reason. The leading editorials evince intensity of feeling, and are frequently characterized by such violence of manner, such heated temper, such deep-seated personal animosity, involving a total loss of self-respect, that the high considerations of truth, justice, and patriotism, become merged in the tornado of passion and excitement. Many forget the dignity of their calling, and descend to write calumnies by the wholesale. No place—no time—no condition of any candidate for any considerable popular favor, is beyond their malevolent attacks.—Even the domestic circle is frequently invaded, and things stated for truths which the authors at the time well know to be wholly false. How many columns of private scandal have been printed to serve party purposes? How often has the doctrine been acted upon, that the end justifies the means? Is this mere imagination, or is it sober truth? Let every disinterested reader answer for himself. How many pure, upright, and honorable men, have been excluded from political favor, by the cabals of the day? Men of intelligence, of acknowledged worth and abilities, have been thrust ruthlessly aside, to give place to the brawling demagogue. They were unwilling to enter a contest where known merit, talent, and strict adherence to principle, were made subservient to the blustering officiousness of the porter-house cliques of the times. We firmly believe our country has been cursed quite long enough by the trammels of party. Let men learn to act and speak for themselves, unawed by the frowns or threats of the mere partisan, and in our opinion a healthier state of things would immediately ensue. Let us, then, individually, and as a people, respect real worth and sterling integrity, whenever and wherever it is found. It was upon these principles our forefathers—the heroes of the revolution—acted. They invariably made merit the test of favor. Let us, in this respect at least, imitate their example, and thus prove ourselves worthy sons of such noble sires.

If there be one practical precept which we could wish to be printed in starry characters on the dark face of our mighty sky, written in sunbeams on the tablet of the earth, and uttered both night and day in voices from

the heavens, that the attention of men might be irresistibly turned to it, and their hearts unavoidably impressed by it, this is the one,—"FORBEARING ONE ANOTHER IN LOVE." This one short precept, universally obeyed, would set all right, and produce all order. It would not at once reconcile all minds, but it would harmonize all hearts. It would not amalgamate all churches into an external uniformity, but it would combine them all in the unity of the spirit, and the bond of peace. It might not hush the voice of controversy, but it would take from it the harsh dissonance of human passion, and cause it to speak in the mellifluous tones of Divine charity.

The souls of our countrymen, slain by infidelity and intemperance, with their associates in profligacy, error, and vice, lifteth another cry, high up into the heavens. It calls sternly for vengeance on these offspring of a most cruel and relentless fiend. Such enemies as these should find no favor, no harborage among the children of the Pilgrims. For these sins the land mourns. While these are countenanced, nay, even sometimes passed by without reproof, and, what is still worse, applauded, there is great cause to fear; and although as yet no very alarming consequences may have been the result, such departures from the living God must sooner or later, terminate unfavorably, leaving our country a prey to the tempest, that has overwhelmed in its resistless course the mightiest empires of the old world,—that rolled upon ill-fated France an avalanche of guilt and crime, and whose destructive influence, if not boldly and successfully encountered, may, ere long, bury deep in its own ruins the noble fabric, reared by the toils and virtues, the blood and prayers of the illustrious fathers of our country.*

Eloquent voices come down out of heaven to reprove us. They warn us of approaching evils, and call loudly upon us to repent in dust and ashes. Let us, then, as individuals, each one contribute his part to stem the torrent of corruption. The enemy is at the

* NATIONAL MORALITY.—Claiming full exemption from all superstition, we firmly believe, and take pleasure in announcing it, that no state can prosper in a long career of true glory, in the disregard of the claims of justice, and the injunctions of the Christian religion. A floodtide of apparent prosperity may come, filling for the time the avenues of trade, and satiating the cravings of taste and curiosity, yet, sooner or later, it has its ebb, and either cloy with its abundance, or leaves the void greater than before. History is a silent but eloquent witness of its truth, and from her undying lamp sheds a stream of unceasing light along our pathway. The fabrics of ancient greatness, built by injustice and consecrated to ambition, are now flitting shadows before us, starting up from behind the broken pillars and falling columns that were reared to perpetuate the genius by which they were wrought.

door. He is forcing an entrance into our most sacred places. The temples of religion and the seats of learning are tainted with the monster's foul breath, and the promise and strength of our young men are bowing down under the weight of his relentless and withering arm. Beneath his iron heel the loveliest flowers of earth are crushed, and the beautiful buddings of virtue for ever blasted. There is no time to be lost. And while each for himself makes secure the foundation of his own hopes, let our prayers ascend for our country, that amid all the flashings of its brightness, it may be irradiated by the light of religion, blessed by the prayers of its citizens, worshipped with the gratitude of every patriot heart; and then the return of each year shall be hallowed by increasing associations of moral sublimity, till every beam shall have met in one common focus, even the salvation and happiness of every individual who forms a part and lives within the boundaries of the great republic of the western world.

One of the noblest moral pictures of antiquity is that of Curtius leaping into the gulf that had yawned in the Roman Forum—and the patriot poet could not have found, in the rainbow regions of fancy, a more glorious picture than that drawn by Robert Treat Paine, which represents Washington standing at the portals of our national temple, catching, on the point of his sword, the lightnings of faction, and guiding them harmlessly to the deep. But higher honors await the American patriot who walks around the bulwarks of our empire, lifts the voice of warning at every suspicious appearance, and moulds its highest towers to the transcendent model of republican beauty and Christian simplicity. Bombastic, inflated forms of speech, although used to surfeit on the subject of our national independence, do not belong to it any more than gaudy coverings and silken frippery belong to the perfect forms of ancient statuary. The sublimity of circumstance and of fact is enough to chain the tongue to its most chastened simplicity, while the ardor of the grateful distended heart burns in the eyes, and lends eloquence to language.

We have alluded to infidelity, as a serpent foe in the midst of us—but although we warn, we do not fear. This serpent shall trail the dust beneath the chariot wheels of pure republicanism—and a little further onward, chained to the millennial car, the monster's blood and the torn fragments of his sinuous body shall be scattered in the whirlwind revolutions of angry wheels. There is a natural land where there is no serpent. There shall be an entire world where no moral serpent's hiss shall startle innocence, or interrupt the singing of the turtle-dove.

NEW-YEAR'S DAY.

Go read the history of the past, on pages written with blood! Count, if you can, the slaughtered victims that have found their last resting-place on the gory battle-plain which are so thickly interspersed throughout our earth, making it, as it were, one vast Potter's field. Watch those drops of anguish and sorrow, that have gushed from affectionate hearts, broken by the fierce carnage of war, and see them, as a mighty river, swelling to an ocean of grief sufficient to drown all the warring hosts of every age. Harken to the wail of widows and orphans, deep-toned and terrible enough even to startle the myriads of hell, and make them cower before the storm of anguish! But that storm shall pass away; and mountains that have interposed to make enemies of nations, shall be levelled before the advancing triumphs of him who came heralded as the "*Prince of Peace*." The instrument of death, under the skill of the ingenious mechanic, shall turn the sod and prepare it for the seed, which shall present her "full corn in the ear" to the hand of man. Happy! glorious epoch in the world's history! The Lord hasten its consummation! Then, Christian patriot, is your triumph! The bat-winged minions of darkness shall retreat before this morning of moral independence, and one wide generous glow of radiance diffuse itself above, around the lovely and loving disciples of the ever-blessed Jesus. Then shall earth be like heaven. Then rejoicings shall break out in every desert and barren land, while the ancient fertility hastens back to earth, as when Adam first sung his morning hymn in Eden. Then the sons of God will shout for joy, as in the morning of the young creation. Then a more heavenly song than the hoarse trumpets breathe, or the deep-mouthed cannon utter, shall roll its harmonies through the vocal creation, swelling its solemn sweetness to every ear—"PEACE ON EARTH, AND GOOD WILL TO MAN."

"O scenes surpassing fable, and yet true;
Scenes of accomplished bliss! which who can see,
Though but in distant prospect, and not feel
His soul refreshed with foretaste of the joy?
One song employs all nations; and all cry,
'Worthy the Lamb, for he was slain for us!'
The dwellers in the vales and on the rocks
Shout to each other, and the mountain tops
From distant mountains catch the flying joy;
Till nation after nation taught the strain,
Earth rolls the rapturous hosannah round.
See Salem built, the labor of a God!
Bright as a sun the sacred city shines;
All kingdoms and all princes of the earth
Flock to that light; the glory of all lands
Flows into her; unbounded is her joy,
And endless her increase."

"A HAPPY NEW YEAR!" has been the repetition of a thousand merry voices this morning. This is a day on which old feuds should be broken down, warm friendships be strengthened, and new acquaintances formed. New York, of all the states, keeps new-year's day with the greatest spirit. It is one of the bequeathments of our Dutch forefathers. While in New England the austerity of the puritan breathed the denunciation of the iconoclast on all festivals, the homely settler of New Amsterdam encouraged them. The savants of the east enacted laws to make the people sober, and to render illegal all support of such festivities. When bleak and cheerless winter set in on the little island of Manhattan, the severity of the season was utterly disarmed by the social qualities of its plain good-natured inhabitants. There was a regular interchange of visits among the neighbors, and all parties laid in a large supply of cookies, as was called their *koek*, or cake, on which to regale themselves. Probably from this circumstance has come down to us the present agreeable custom of the gentlemen making their calls on the ladies of the household. The first day of the year has in it something peculiar, and which at once recommends it to the observance of every heart: the customary division of time of the world's age, of the different phases of history, and what endears it more particularly, of the life of man. The birthday remembrance is but an individual consideration, but on this day the nations, as with a simultaneous thought, add one to the years of their being, while old mother Earth dots another year of her existence on the calendar of time. This is a day of gifts, a day for the expression of affection by little mementoes, which become the household representatives of love and kind regard. Man in many traits is the same now that he was some thousands of years ago. We now give new-year's presents—so did the ancient Romans. On the first of January, long before the advent of the Messiah, the Eternal City was kept in a yearly hum with the passing feet of the bearers of the *strenæ*, or presents: the patron received them from his client, the citizen gave them to the magistrate, and friends gave them to each other. The visitor brought his *xenium*, or guest-gift, and received his *strenæ*, or return-gift. These were new-year's presents. The gifts consisted chiefly of rare coins, gilt dates, plums dried and gilt, figs, and other small household matters, ornamented with the head of Janus, to which god the festivities of the day were dedicated. Persons visiting had their compliments, which have come down to us. An-

Annuit cœlesti felixque tibi, said the ancient Roman to his friend. *A prosperous and happy new year to you!* great stress being laid on the word *prosperous*, for success in any matter on new-year's day, augured well for the whole year. The Druids had their solemn days for cutting the sacred mistletoe with a golden knife, from some aged tree in their forest, dedicated to their gods. This, with much ceremony, was dried into branches, and distributed on new-year's day as gifts to the people. Our Saxon ancestors, in common with the Teutonic nations or tribes, made merry on this day, observing it with gifts and unusual festivity. Indeed, it was a season of great importance with them, as from it they numbered their age; and the hoary-headed man of seventy was called the man of seventy merry-makings. England does not celebrate the day with much festivity, the only observance being that beginning on the last night of the old year; the bells of the various churches ring out their merry peals until past midnight—as is said, they ring the old year out and the new year in. But the greatest *clat* is given to this festival in France, where all other nations are far outstripped in the lavish nature of the gifts. The expenditures for sweetmeats, &c., in Paris, exceed \$100,000, while the sales of jewelry and fancy articles for some five days about this time, equal one fourth the sales of the whole year. A Parisian of 10,000 francs a year, will spend one fifteenth of it in new-year's presents. In the visits of the day, the French have an etiquette which is quite becoming. The nearest relations are first visited, and so on, until they have all been called on; then the friends are visited. This is all done in the morning. A dinner is given, and the evening winds up with social amusements. Still, although we do not make such lavish expenditures, we are not a whit behind any people in the social enjoyment of the time. The kind congratulations between the sexes, make it a happy day, and a fitting *debut* of the coming year. Enjoy it, then. Be social, forgiving, and kind-hearted, and in the midst of this glad festivity let gratitude have a place in every heart. Remember those who are in adversity, and see that the poor have the means of uniting in the festival. Temperance is a virtue, which confers on her faithful votaries, on festivals like to-day, blessings in rich profusion; while Bacchus overwhelms his followers in drunkenness, disgrace, pain, despair, and sorrow.

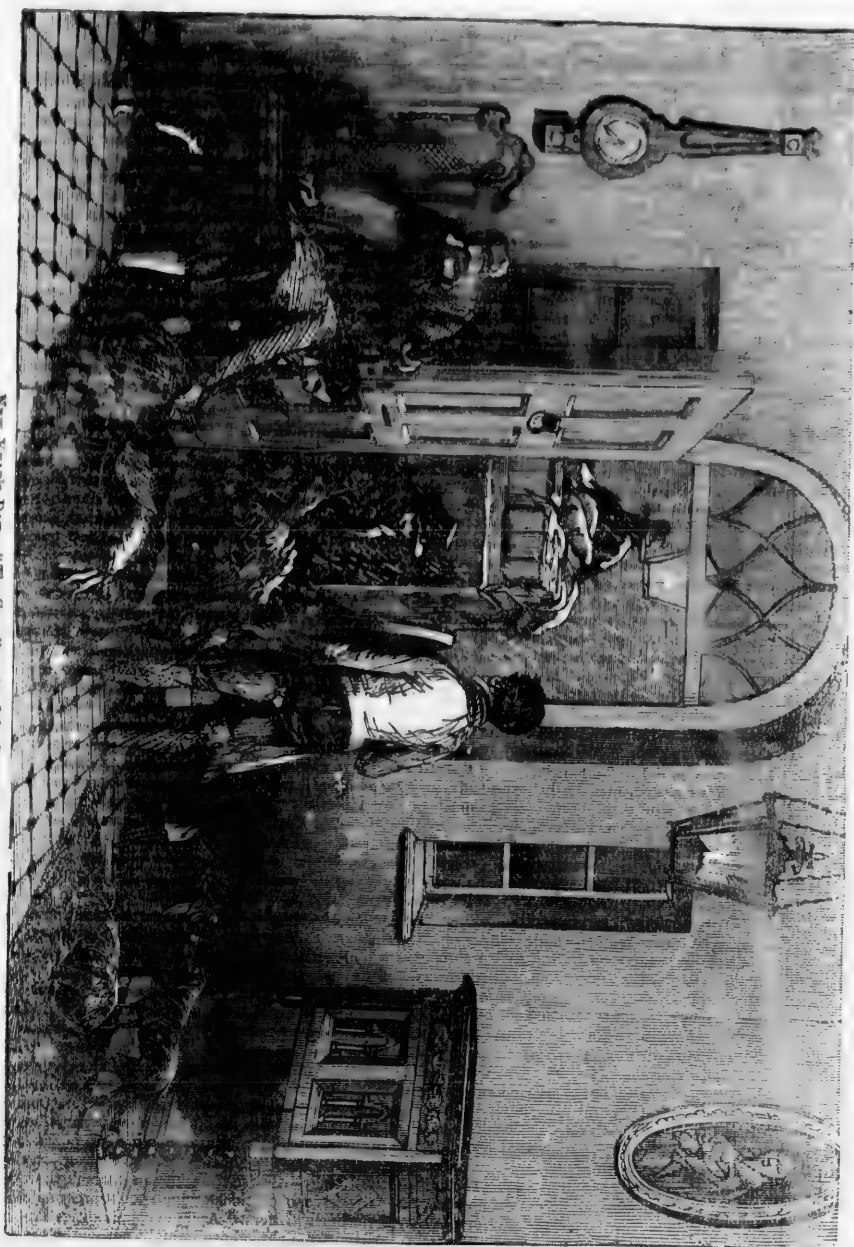
We can not better close our remarks on the new year than by giving the ruminations of WASHINGTON IRVING from his "elbow chair:"—

"In this season of festivity, when the gate

of time swings open on its hinges, and an honest, rosy-faced, new year comes waddling in, like a jolly, fat-sided alderman, loaded with good wishes, good humor, and minced pies; at this joyous era, it has been the custom, from time immemorial, in this ancient and respectable city, for periodical writers, from reverend, grave, and potent essayists, like ourselves! down to the humble but industrious editors of magazines, reviews, and newspapers, to tender their subscribers the compliments of the season; and when they have shily thawed their hearts with a little of the sunshine of flattery, to conclude by delicately dunning them for their arrears of subscription-money. In like manner, the carriers of newspapers, who undoubtedly belong to the ancient and honorable order of literati, do regularly, at the commencement of the year, salute their patrons with abundance of excellent advice, conveyed in exceeding good poetry, for which the aforesaid good-natured patrons are well pleased to pay them exactly twenty-five cents. This honest, gray-beard custom of setting apart a certain portion of this good-for-nothing existence for the purposes of cordiality, social merriment, and good cheer, is one of the inestimable relics handed down to us from our Dutch ancestors. In addition to this divine origin of new-year festivity there is something exquisitely grateful to a good-natured mind, in seeing every face dressed in smiles; in hearing the oft-repeated salutations that flow spontaneously from the heart to the lips; in beholding the poor, for once enjoying the smiles of plenty, and forgetting the cares which press hard upon them, in the jovial revelry of the feelings; the young children, decked out in their Sunday clothes, and freed from their only cares, the cares of the school, tripping through the streets on errands of pleasure; and even the very negroes, those holiday-loving rogues, gorgeously arrayed in cast-off finery, collected in junts, at corners, displaying their white teeth, and making the welkin ring with bursts of laughter, loud enough to crack even the icy cheek of old winter. There is something so pleasing in all this, that I confess it would give me real pain to behold the frigid influence of modern style cheating us of this *jubilee of the heart*, and converting it, as it does every article of social intercourse, into an idle and unmeaning ceremony. 'Tis the annual festival of good humor;—it comes in the dead of winter, when nature is without a charm, when our pleasures are contracted to the fireside, and when everything that unlocks the icy fetters of the heart, and sets the genial current flowing, should be cherished, as a stray lamb, found in the wilderness, or a flower blooming among thorns and briars."

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NEW YEAR'S DAY.—"The Compliments of the Season."



† MUTUAL DEPENDENCE.

THE mutual relationship and dependence of those who constitute the body politic, and who, when regarded in this point of view, may be resolved into the two general classes of governors and governed, is easily demonstrable by such a plain and simple process of reasoning as that which follows. The body of man, from its liability to be affected by hunger and cold, stands in need of food and raiment. With these, the Indian or the savage, who is content to eat the flesh, and wear the skins of the animals he shoots or spears in the thicket or forest, can supply himself. But the inhabitants of civilized countries, like our own, commonly obtain their food and clothing by purchase. There is no purchasing either the necessities or the comforts of life without money: and unless this be possessed, as in the case of those who are usually denominated rich, by right of inheritance, it must be acquired, as in the case of the poor, by individual or relative exertion. Both rich and poor, however, need protection, more than themselves can furnish, from the attacks of ruthless violence: the rich, that they may keep possession of what they have inherited, or honestly accumulated; and the poor, that their persons may be unmolested while they are engaged in earning a subsistence for themselves and their families. This protection of property and person, from the robber or plunderer, and the mischievously-disposed, is afforded to rich and poor alike, by the laws of their country, which, for this purpose, impose restraints, and threaten penalties. But the laws of a country, in order to become efficient as the means of yielding protection must be duly administered and enforced. The administration of law devolves upon the executive government. And in return for the protection afforded both to rich and poor by a due administration of the laws, such a government is justly entitled to support from those under its superintendence.

As the circumstances of the case thus establish a mutual relationship between the governed and their governors, so likewise do they render them dependent upon each other; and as the governed can not say to their governors, "We have no need of your protection;" so neither can rulers say to those under their jurisdiction, "We have no need of your attachment and support."

And since a similar relationship exists among the members of the social body, there is also a similar state of dependence observable. The mechanic and the laborer are dependent upon their employers for the means of earning a livelihood; and their employers are dependent upon the mechanic and the la-

borer for the manufacture of their goods, and the cultivation of their lands. The manufacturer is dependent upon the merchant for the vending of his wares; and the merchant is dependent upon the manufacturer for a proper quantity of merchandise. The agriculturist is dependent upon the public at large for the consumption of his grain; and the consuming public are dependent upon the agriculturist for a plentiful supply of produce. The poor are dependent upon the rich for the distribution of their wealth, that they may have wherewith to purchase food and clothing; and the rich are dependent upon the poor for the comforts and conveniences they derive from the skill of artisans and servants. Tradesmen and workpeople, and, indeed, all ranks in society, the higher as well as the lower, are dependent upon those belonging to the learned and scientific professions for the valuable and beneficial exercise of their varied talents; and the members of these professions are dependent upon those who employ them, for the emolument by which they are enabled to support themselves, and maintain their respectability.

Nor is this social dependence merely reciprocal. It extends throughout the whole community; so that those of one class can not say to any of the other classes around them, "We have no need of you." The correctness of this statement may be shown by the familiar illustration which the materials and making of a pair of shoes will furnish. Supposing the leather to be a home production, not imported from abroad, it is stripped in the form of skin from the carcass of an animal, bred by a farmer or grazier, and slaughtered by a butcher; and this skin is prepared by the tanner, and dressed by the currier, previous to its being cut, shaped, and put together, by the shoemaker and his assistants. In putting the different parts of a shoe together, waxed thread is used; the wax being a composition of substances usually imported; and the thread spun by a twine-spinner of hemp which he obtains from the flax-dresser, who either imports the article, or purchases it of the grower. And before a single nail can be driven into the heel of a shoe, the miner must be at work in getting iron ore; the smelter in separating the metal from the dross with his furnace; the forger in beating out the pig-iron into bars or rods; and the nailsmith in reducing the iron rods to the size and length required. But the nailsmith, the forger, the smelter, and the miner; the twine-spinner and flax-dresser, the shoemaker, the currier, and the tanner—all use a variety of tools in their respective operations, which tools are made by other artificers. And the commodities imported from abroad are brought across the sea

ufacture of their goods, and their lands. The manufacturer upon the merchant for the res; and the merchant is manufacturer for a proper ndise. The agriculturist is e public at large for the grain; and the consuming ent upon the agriculturist ly of produce. The poor a the rich for the distribu- th, that they may have anse food and clothing; and lent upon the poor for the eniences they derive from as and servants. Trades- le, and, indeed, all ranks er as well as the lower, are se belonging to the learned ssions for the valuable and of their varied talents; f these professions are de e who employ them, for which they are enabled to , and maintain their re-

dependence merely recip- throughout the whole com- ose of one class can not ther classes around them, d of you." The correct- ent may be shown by the a which the materials and shoes will furnish. Sup- to be a home production, abroad, it is stripped in the the carcase of an animal, r grazier, and slaughtered this skin is prepared by essed by the currier, pre- at, shaped, and put togeth- er and his assistants. In nt parts of a shoe together, ed; the wax being a com- ces usually imported; and a twine-spinner of hemp from the flax-dresser, who article, or purchases it e before a single nail can be l of a shoe, the miner must ng iron ore; the smelter in al from the dross with his in beating out the pig-iron and the nailsmith in re- s to the size and length re- nailsmith, the forger, the iner; the twine-spinner and hoemaker, the currier, and e a variety of tools in their ons, which tools are made And the commodities im- are brought across the sea

in ships, which must be constructed, fitted out, and navigated, by ship-carpenters, riggers, storekeepers, and sailors. Consequently, those who wear pegged shoes (which working and country people generally prefer), are dependent, directly or indirectly, upon the shoemaker with his long list of co-operators;* and these again are all dependent upon the wearers of shoes for the share they contribute toward providing them with employment; nor can either party say to the other, "We have no need of you."

It is fully evident, therefore, that man is not an independent, but a dependent being. His life, his comforts, his enjoyments, are all derived. And in himself considered as a solitary individual, he possesses no resources out of which his wants can be supplied. On God, as the Father of mercies, he depends for the bestowment of providential favors; and on his fellow-creatures, as members of society, for the means of their attainment. "Every good gift and every perfect gift is from above, and cometh down from the Father of lights," Jas. i. 17; yet the blessings he bestows upon his creatures are conveyed through the medium of their fellow-men; that by perceiving their fraternal relationship, they may act toward each other as members of the same vast family; and by rendering each other mutual assistance, may confirm and strengthen the natural bonds of social life.

MAMMON AND MANHOOD.

THE Scripture speaketh not in vain in saying that "the love of money is the root of all evil," for there is not an evil under the sun, to the commission of which men are not

* It may not be improper to observe here, that this extensive dependence is productive of great advantages, since it enables individuals to purchase at a cheap rate, what otherwise it would be impossible for many of them to procure. If one person had to provide and prepare all the requisites for a pair of shoes, as well as to put them together, the price demanded as a fair remuneration for time occupied, and labor bestowed, must of necessity be incalculably great. In a book entitled, "The Results of Machinery," it is remarked: "There are thousands of families, on the face of the earth, that would be glad to exchange all they have for a tin kettle, or an iron pot, which can be bought almost anywhere for twenty or thirty cents. And could the poor man in this country, but once see how even the rich man in some other places must toil day after day, before he can scrape or grind a stone, so as to be able to boil a little water in it, or make it serve for a lamp, he would account himself a poor man no more. A gipsy carries about with him more of the conveniences of life, than are enjoyed by the chiefs or rulers in countries which naturally have much finer climates than many parts of our own."

prompted by the love of money; and yet, notwithstanding all the light on this subject given in the Scriptures, and confirmed by general experience, men everywhere are occupied in the constant and keen pursuit of wealth, and the prime object with the many is to obtain it, and to push their families forward in the unhappy race of avarice and aggrandizement. For money, men sacrifice domestic comfort, health, character, and even hazard life itself; for it, they are guilty of fraud, deception, and robbery.

For money they sacrifice friendship, gratitude, natural affection, and every holy and divine feeling. For money, man becomes a creeping, crawling, obsequious, despicable creature, instead of walking erect as the offspring of God. Mammon and Manhood are incompatible.

Why all this anxiety about money? why this constant fever, this pushing and driving in order to obtain it? even because men form a false estimate of life and its elements. "A man's life consisteth not in the abundance of the things which he possesseth." He who would LIVE must stir up the divine fire that is in him, to consume selfishness, and to dispense light and heat to all around. Money he may seek in moderation, as a means, not as an end; and in order to preserve his manhood, he must learn to practise self-denial and economy, and to be contented with small things; above all, he must remember that God has set honor upon labor, by appointing man to live by labor; labor is truly honorable, and however mean the occupation may be, if honest, it is never disgraceful.

Instead, therefore, of sinking Manhood in the pursuit of Mammon, by creeping, crawling, and bending to every one whom you may imagine can help you forward in the race of worldly advancement, stand erect, determine in the strength of God to be a man, to buy the truth, at whatever cost, and never to sell it for any price; to labor at any work if needful, to speak what is in thy heart, and never to creep, and crawl, and mutter. God helps those who help themselves.

Stand upon thy Manhood in the world, not upon thy Mammon; stand upon thy own character and upon thy own estimate of thyself made in all honesty, not upon the opinion of others. *Be afraid of sin*, but never shrink at misrepresentation, or at contumely, or contempt, or poverty. Why should you be afraid? Life is in thyself, and thy enjoyment should be unapproached and unapproachable.

It was once, when men were worthy of office the people knew it first, but now the office-seeker first finds it out.



John Hancock

Portrait of John Hancock, with fac-simile of his signature, copied from the Declaration of Independence.

✕ JOHN HANCOCK.

"Thy spirit, Independence, let me share,
Lord of the lion heart and eagle eye,
Thy steps I follow with my bosom bare,
Nor heed the storm that howls along the sky.
Immortal liberty, whose look sublime
Hath blanched the tyrant's cheek in every varying
clime."

We have much pleasure in presenting to our readers a correct portrait of the above-named celebrated patriot, whose bold and manly signature is so much admired, on the charter of our liberties, together with a view of the old mansion-house, still standing in Boston.

John Hancock was born at Quincy, near Boston, whence have emanated the two presidents Adams. He was the son and grandson of eminent clergymen, but having early lost his father, was indebted for a liberal education to his uncle, a merchant of great wealth,

whose counting-house he afterward entered, but soon sailed for England, where he was present at the coronation of George III. His uncle dying in 1774, he succeeded to his large fortune and business. He was active as a member of the provincial legislature against the royal governor, and became so obnoxious to him, that after the battle of Lexington, he and Samuel Adams were excepted by name in a proclamation offering pardon to the rebels who should swear fealty to Britain. They escaped from one door of a house as the British soldiers entered it at another, and thus their valuable persons were preserved to aid the good cause of the Revolution.

Hancock was president of the provincial congress of Massachusetts, until sent a delegate to the general congress at Philadelphia, in 1775, where he was soon chosen to succeed Peyton Randolph as president of that august assembly. He was the first to affix

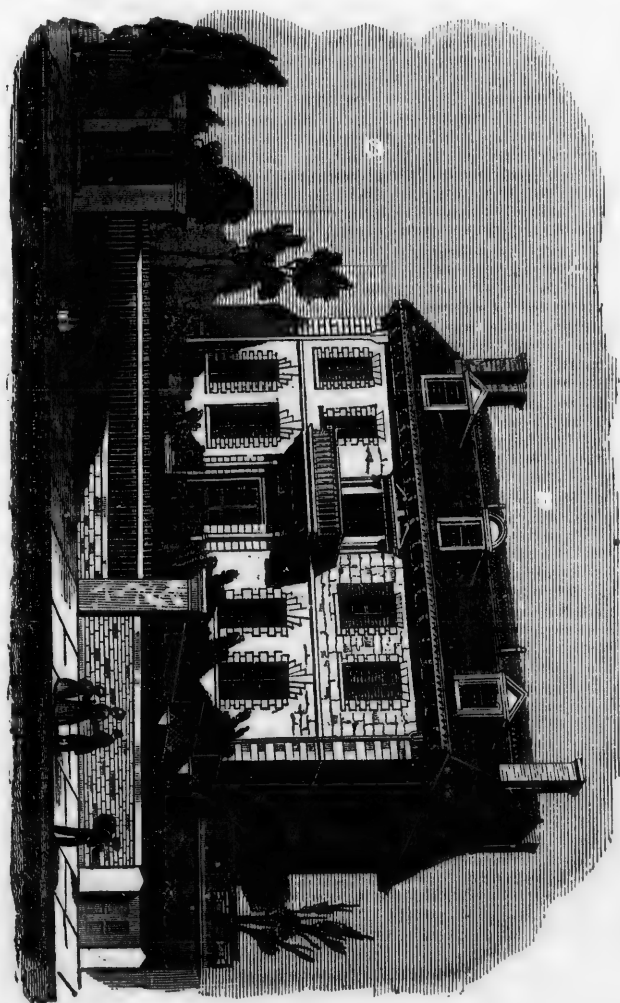
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The Hancock House, Boston.



his signature to the Declaration of Independence, which was first published with no other name attached. He filled this important chair till 1779, when gout compelled him to retire from congress. He was then elected governor of Massachusetts, and was annually chosen from 1780 to 1785, and after an interval of two years was re-elected, and continued to fill the office until his death, October 8th, 1793, at the age of fifty-six years. He acted also as president of the convention of the state for the adoption of the federal constitution, for which he voted.

His talents were rather useful than brilliant. He seldom spoke, but his knowledge of business, and facility in despatching it, together with his keen insight into the characters of men, rendered him peculiarly fit for public life. Being well acquainted with parliamentary forms, he inspired respect by his attention, impartiality, and dignity. In private life he was remarkable for his hospitality and beneficence. He was a complete gentleman of the old school, both in appearance and manners, and was a magnificent liver, lavishly bountiful, keeping a coach and six horses, and distinguished for his politeness and affability.

When Washington consulted the legislature of Massachusetts upon the propriety of bombarding Boston, Hancock advised its being done immediately, if it would benefit the cause, although nearly his whole property consisted in houses and other real estate in that town. Carroll, of Carrollton, and Hancock, probably risked more property on the event of the straggle than any other two individuals. The estate at Quincy, which was his inheritance, is now the property of our distinguished countryman, the venerable ex-president, John Quincy Adams.

The first provocation of the British government which created a spirit of civil discord among her provinces, was the imposition of duties upon the importation of foreign merchandise, and other injuries impairing the prosperity of the colonial commerce. Upon this occasion, all the address and diligence of Mr. Hancock was exerted in opposition to a system of legislation so rapacious and tyrannical. It was by his agency, and that of a few other citizens of Boston, that for the purpose of procuring a revocation of these duties, associations were instituted to prohibit the importation of British goods; a policy which soon afterward being imitated by the other colonies, first served to awaken the apprehensions of the people, and to kindle those passions that were essential to the success of the war and the preservation of their liberties. The agitation of this subject produced no common animosity, and in some instances acts of atrocity and outrage, of which we may mention as

among the most conspicuous, the case of Mr. Otis, who at the instigation of a British officer, was assailed by a band of ruffians, with a violence which impaired his reason, and hastened his death.

About the same time, a vessel belonging to Mr. Hancock, being loaded, it was said, in contravention of the revenue laws, was seized by the customhouse officers, and carried under the guns of an armed vessel at the time in the harbor, for security; but the people, exasperated by this offensive exertion of authority, assembled, and pursuing the officers, beat them with clubs, and drove them on board their vessels for protection. The boat of the collector was then burnt in triumph by the mob, and the houses of some of his most obnoxious adherents were, in the first transports of popular fury, razed to the ground. Thus Mr. Hancock, in more ways than one contributed to set the great wheel of the Revolution in motion, though he could not himself have approved of such acts, which were disapproved by the legal authorities. Yet Hancock derived from his connexion with the affair an increased popularity. At an assembly of the citizens, Mr. Hancock and others were appointed to request of the governor a removal of the British troops from the town, which the governor attempted to evade. A second committee being selected, of which Mr. Hancock was chairman, voted the excuses made inadmissible, and by a more peremptory tone of expostulation, urged and obtained their removal. This governor had complimented Hancock in 1767, with a licentiate. But declaring his determination to hold no office under a man whose vices and principles he considered hostile to the liberties of his country, he tore up the commission in presence of many citizens; for which bold act he received the severe reprehension and threats of the royal government.

Of the modesty of Hancock there is a very beautiful anecdote related by his biographers. That there were members of the first Congress of superior age to his, and men at the same time of pre-eminent virtues and talents, will not be denied. The occasion was one upon which calmness was essential, for rarely in the vicissitudes of nations, has it happened that interests more sacred have been confided to the infirmity of human wisdom and integrity, or that a spectacle more imposing has been exhibited to human observation. Mr. Hancock's timidity at being called to fill the chair was relieved, it is said, by a strong-nerved member from the south, who led or bore him to the speaker's seat; when placed in that conspicuous position, he presided with a dignity and capacity that extorted the respect and approbation of even his enemies.

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After his death, his body lay in state at his mansion, where great multitudes thronged to pay the last offices of their grief and affection. His obsequies were attended with great pomp and solemnity, and amid the tears of his countrymen, he was committed to the dust.

His wife was a Miss Quincy, whom he married about twenty years before his death. She was the daughter of an eminent magistrate of Boston, and one of the most distinguished families in New England. No children of this connexion were left to inherit his fortune or perpetuate his name; his only son having died during his youth.

In stature Mr. Hancock was above the middle size, of excellent proportion of limbs, of extreme benignity of countenance, possessing a flexible and harmonious voice, a manly and dignified aspect. By the improvement of these natural qualities from observation and extensive intercourse with the world, he had acquired a pleasing elocution, with the most graceful and conciliating manners. Of his talents it is a sufficient evidence, that in the various stations he filled, he acquitted himself with an honorable distinction and capacity. His communications to the general assembly, and his correspondence as president of congress, are enduring proofs of his putting his shoulder effectively to the wheel of public affairs. His knowledge was practical and familiar. He neither penetrated the intricacies of profound research, nor did he mount to inaccessible elevations.

Hancock first put his name to the immortal Declaration of Independence; had his life been marked by no other event, it would have entitled him to ever-enduring renown—but in connexion with that act, he combined great and useful wisdom in the councils of our infant nation, and his name will descend to posterity with unqualified lustre.

THE OLD MANSION in which Hancock lived, is situated upon the elevated ground in Beacon-street, fronting toward the south, and commanding a fine view of the "Common." The principal building is of hewn stone, "finished, not altogether in the modern style, nor yet in the ancient Gothic taste." It is raised twelve or thirteen feet above the street; and the ascent is through a garden, bordered with flowers and small trees. Fifty-six feet in breadth, the front terminates in two lofty stories. While occupied by Governor Hancock, the east wing formed a spacious hall; and the west wing was appropriated to domestic purposes: the whole embracing, with the stables, coach-house, and other offices, an extent of two hundred and twenty feet. In those days, there was a delightful garden behind the mansion, ascending gradually to the high lands in

the rear. This spot was also handsomely embellished with glacia, and a variety of excellent fruit-trees. From the summer-house might be seen West Boston, Charlestown, and the north part of the town; the colleges, the bridges of the Charles and Mystic rivers—the ferry of Winnisimmet, and "fine country of that vicinity, to a great extent." The south and west views took in Roxbury, the highlands of Dorchester and Brookline, the blue hills of Milton and Braintree, together with numerous farmhouses, verdant fields, and laughing valleys. Upon the east, the islands of the harbor, "from Castle William to the lighthouse, engaged the sight by turns, which at last was lost in the ocean, or only bounded by the horizon."

Governor Hancock inherited this estate from his uncle, Thomas Hancock, Esq., who erected the building in 1737. At that period, the "court part of the town" was at the "north end," and his fellow-citizens marvelled not a little that he should have selected, for a residence, such an unimproved spot as this then was.

In the lifetime of that venerable gentleman, the doors of hospitality were opened to the stranger, the poor, and distressed; and annually, on the anniversary of the Ancient and Honorable Artillery Company, he entertained the governor and council, and most respectable personages, at his house. The like attentions were shown to the same military body by Governor Hancock, who inherited all the urbanity, generous spirit, and virtues of his uncle.

It is now, we believe, the property of some of the descendants of Governor Hancock, and rented as a private dwelling. But since the demise of that eminent man, the hand of time and improvement has been constantly contending, around and against it. It can not long resist such attacks; and, before many years elapse, this famous mansion will probably be razed to the ground, "and its place supplied by others."

GOVERNMENT OF TEMPER.—Every human creature is sensible of the propensities to some infirmity of temper, which it should be his care to correct and subdue, particularly in the early period of life; else, when arrived at a state of maturity, he may relapse into those faults which were originally in his nature, and which will require to be diligently watched and kept under, through the whole course of life; since nothing leads more directly to the breach of charity, and to the injury and molestation of our fellow-creatures, than the indulgence of an ill-temper.

NEW ENGLAND LIBERALITY, SCHOOLS, AND INSTITUTIONS.

"For learning, be liberal. Spare no cost; for by such parsimony, all is lost that is saved; but let it be USEFUL KNOWLEDGE, such as is consistent with truth and godliness."—WILLIAM PENN.

THE first settlers of New England are justly entitled to a large share of the credit of having given an impulse to the cause of popular education. In the year 1668, a document was published, by order of the governor and council of Massachusetts, and addressed to the elders and ministers of every town, in which paper was set forth an earnest desire for the moral and religious instruction of the people, and an appeal to those to whom the instrument was directed, to examine whether the education of youth in the English language was attended to. From the time of WINTHROP, MATHER, and their associates, who labored most zealously in this field of usefulness, to the present period, New England has devoted her attention to the promotion of knowledge; and in the industry, integrity, and frugality, of her children, beholds now the brilliant results of her perseverance. When we consider that the tide of emigration, which is sweeping before it the forests of the west, takes its rise in the eastern section of the United States, and bears upon its bosom the elements of enrichment—that it is composed in a great degree of those who have been enabled there to obtain the rudiments of learning—the first principles of valuable information—ought we not to be grateful to those who have toiled, and feel it to be both a privilege and duty to acknowledge with gratitude the many princely donations of the "sons of the pilgrims" to the cause of education, in order to keep the fountain well supplied, pure, and transparent, for future use?

When proper respect is thus paid to such as are possessed of those liberal talents and enlightened views, which constitute TRUE GREATNESS, it must evidently be productive of the happiest consequences—especially to youth, whose minds are so open to impressions, and on whom the force of example acts with an important effect, that can not fail of producing a corresponding good—exciting a laudable emulation; leading their views from grovelling pursuits to a search after and love of virtue, knowledge, and the various qualities which strengthen society, brighten the social links which bind man to his fellow-man, and so pre-eminently distinguishes the members of a civilized, intelligent community, from the rude and unenlightened nations of countries where education and its train of blessings

have never been, or are but imperfectly known. There is something peculiarly pleasing and impressive in the contemplation of great and good characters—in those who justly claim the appellation;—we view, admire, and feel an irresistible longing to be like them, to imitate their virtues, and to practise their precepts; we feel ourselves better, and destined to an advancement in knowledge and strength, from the proud consciousness of partaking their natures, and possessing, however humble, a spark of that celestial, intellectual fire, which illumines so brilliantly their minds, and emanates from one common source—the great and inexhaustible Fountain of light and goodness!

It is universally admitted that *ignorance* is the fruitful source of crime and misery. This fact is sufficient, we should imagine, to arouse the most profound attention, and create the deepest anxiety in the bosom of every philanthropist. The necessity of educating the people of a free government is admitted on every side; and yet, through a culpable inactivity, in many states of the Union, on the part of those whose duty it is to move forward on this momentous subject, an immense portion of those into whose hands the destinies of this last sanctuary of freedom must be delivered, is left in total darkness, and wholly unacquainted with the information necessary to the formation of valuable citizens. The cause of freedom—the tranquillity of our country—the present happiness and future prosperity of millions—demand activity, and exhort the people of the United States to unite in a "crusade against ignorance"—a crusade in which every true knight, who rallies under the holy standard, can lay the flattering unction to his heart that he is the champion of the cause of truth, and of the disenthralment of the human mind from the most debasing species of servitude. Let the watchword be, in the ever-vigilant camp of the faithful, "**LIBERTY AND EDUCATION.**"

We have been led into this train of reflection by perusing in the public prints, from time to time, accounts of the various munificent individual donations of the wealthy, patriotic, and benevolent citizens of Boston, in support of its institutions for moral, religious, and literary purposes—continuing unabated from year to year.* Among the most recent, we notice the donations of Hon. ABBOTT LAWRENCE to Harvard college, amounting to FIFTY THOUSAND DOLLARS. Hon. DAVID SEARS has also given TEN THOUSAND DOLLARS to the same institution, and a like sum to Amherst

* Boston has been called the "literary emporium of the western world," and perhaps justly, for it is a fact that a greater portion of men distinguished for acquisitions of this nature have arisen in this city and the vicinity, than in any other part of the United States.

mitted that *ignorance* is crime and misery. This should imagine, to arouse attention, and create the bosom of every philanthropy of educating the peo- ple is admitted on every- thing a culpable inercness, in- evitably, on the part of those who move forward on this mo- mentous portion of those who are the destinies of this last age must be delivered, is left wholly unacquainted with- out to the formation of the cause of freedom—our country—the present prosperity of millions—exhort the people of the world in a "crusade against ignorance in which every true man should be a standard-bearer to his heart that the cause of truth, and the freedom of the human mind from the shackles of servitude. Let the ever-vigilant camp of **TRUTH AND EDUCATION.**" into this train of reflection the public prints, from the various munificence of the wealthy, patriotic citizens of Boston, in- stead of moral, religious, and political—continuing unabated. Among the most recent, of Hon. ABBOTT LAW- LEIGH, amounting to FIF- TY DOLLARS. Hon. DAVID SEARS has contributed FIFTY DOLLARS to the cause. A like sum to Amherst and the "Literary emporium of the West" and perhaps justly, for it is a place where men distinguished for their talents have arisen in this city and other part of the United States.

* H. Lee, Esq., of Boston.

a century and more, have been appropriated for the support of education and for its advancement, by far the largest portion has arisen from the benefactions of charitable and munificent individuals. As a state, considering that the annual income of its inhabitants is much greater than that of the people of any other state of equal number of persons, we have done less for the promotion of education than New York and several other members of the Union. And, but for the unexampled generosity of individuals, the institutions for instruction in the higher branches of education—leaning, as they have done, almost wholly on the bestowments of individuals for support—must, without that private aid, have been in a very low condition, compared with their existing one. So, in regard to charitable establishments: they mainly owe their origin and support to the well-considered and wisely-bestowed contributions of individuals,—nine tenths of which, perhaps, may have come from the citizens of Boston.

“Although the legislatures of Massachusetts, and especially within the last fifty years, have not shown so enlightened and liberal a disposition as their predecessors have done (considering the vast accession to the property of its inhabitants) in regard to popular education, in consequence of the hinderances thrown in the way of the advocates of education by the demagogues of both parties—nevertheless, it is to be hoped that the time has arrived when the resistance made by the demagogues in the legislature and elsewhere, to an advancement in the quality of the schools, and in the qualifications of the teachers, will be discountenanced and overcome by influential men of all parties. Such will certainly be the conduct of reflecting men; for what, we ask, is there so necessary to the prosperity, self-respect, and to the general welfare of the mass of the people, as the advantages derivable from education?

“Upon this all-important subject of education, there are the following just and timely remarks in Governor Bates’ late address to the legislature:—

“‘I can not,’ says this intelligent and excellent magistrate, ‘forbear to present to your earnest consideration, as I have heretofore presented to the consideration of your predecessors, the important subject of popular education.’

“‘This subject should be ever present with the people of the commonwealth and with their legislature. Neither can neglect it without bringing a just reproach upon themselves, and doing injustice to the rising generation.’

“‘In the order of Providence, to each succeeding generation of men is committed the education of the children. This is a high and sacred duty. No generation can perform it

but once. It can not be omitted without guilt.

“‘The people of Massachusetts can not forget, and ought not to forget, that under Providence, the important element of her prosperity has been the ceaseless, diversified, and persevering industry of her population. To labor, contrived by the heads and performed by the hands of her freemen, under the control and influence of her moral, religious, and free institutions, she mainly owes her present character and standing among the states of this confederacy.

“‘On this she must rely for her future weal and success. Our people regard all honest employment as honorable, and look upon idleness, among the rich or the poor, as the prolific parent of vice. But labor, to be successful, must be intelligent. The well-spring of this intelligence is, and always must be found, for the great mass of our population, in the district school-house.’

“In order to overcome, in some degree, the prejudice which, it is conceived, usually exists on the part of the uneducated portion of the country against opinions of leading men in the educated states, we cite the following editorial remarks from a respectable journal published in Richmond, Virginia:—

“‘The reason of the eminent success, and the wonderful manifestation of intellectual and moral power which the New-England states are exhibiting on the rest of the states, and on the general welfare, consists in these two things: every child must be educated, and placed on the same footing while receiving his education; and every honorable occupation is held in like esteem. The consequence of this state of things is, that all men are mentally fit for all pursuits to which their genius applies, and talent is not uselessly employed. This state of things will make any people rich and powerful. If a man has genius for the intricacies of mechanism, he will not nor can not distinguish himself or thrive as a farmer, lawyer, doctor, or merchant. By reversing the system of things here, as they exist in New England, we are struggling against the Almighty himself, and of course we can not succeed. Our policy is wrong, and the sooner we right it the better.’

“If, as alleged by this Virginia writer, the prosperity of New England is justly attributable to the advantages derived from a system of general education, it would seem to follow that the poverty of Virginia is owing to the people of that commonwealth having, as asserted by the editor, acted upon ‘the reverse of the New-England system.’—‘Our policy,’ says this intelligent writer, ‘is wrong, and the sooner we right it the better. We are strug-

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gling against the Almighty himself, and of course we can not succeed."

These extracts, carefully written by their judicious author, are well worthy of deep and prayerful consideration by men of all classes and political creeds. Nothing can be more true than the sentiments therein urged. What are any people, without the advantages of education? Ignorance, indigence, and pauperism, with their usual concomitants and consequences, will continue to be among their most prominent characteristics.

Let public opinion therefore at once, through the influence of the press, the pulpit, and public lectures, be aroused to the necessity of the education of children; let the instruction of a child be considered the paramount duty of a good citizen, and then public sentiment will act much more powerfully to produce the results desired than the staff of the police-officer. Public opinion is the best balance-wheel of the machinery of a society constituted as that is in which we live.

It must be by promulgating among the mass the sentiment of the necessity of education—by arousing their attention to its value—by demonstrating its beneficial results, as not only the best check on the increase of crime and the prevention of pauperism, but also the promoter of public order and private happiness—that we can hope to have education generally diffused. So soon as the people are convinced, we shall secure the brilliant object which all should desire to be effected. To produce great results, must be the work of time. The past labors of the people are the best evidences of their devotion to the advancement of learning, and give great hope that the same system of education which has originated in the New-England states, will become universal, and laid with a broad and deep foundation, on which the pyramid of the republic's glory and security may rise, and remain an imperishable monument of the wisdom of her statesmen.

BURIAL-PLACES & FUNERAL RITES.

"Let's talk of worms and graves, and epitaphs,
Make dust our paper, and with rainy eyes
Write sorrow on the bosom of this earth;
Let's choose executors, and talk of wills;—
And yet not so—for what can we bequeath,
Save our deposed bodies to the ground?"

SHAKESPEARE.

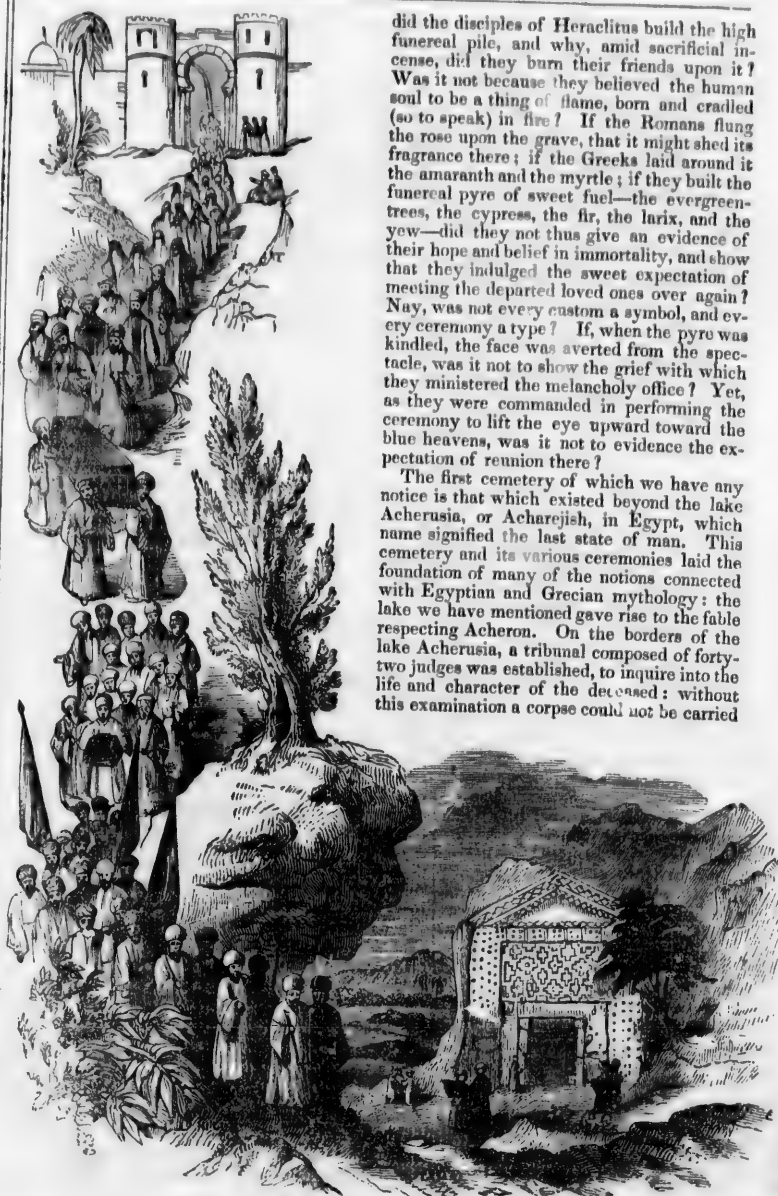
THE customs and observances relative to the dead form a most interesting point of domestic history; the distinctive rites which have marked the ceremony of burial frequently furnish an index to national manners, and they

carry with them to the mind a powerful impression of the universal solemnity with which death has been regarded. And why is this, that in every nation over which a sunbeam floats or a moonbeam falls, every nation where man is found, every nation where Death reigns—(and where does he not reign?)—should be marked by this dread of dissolution? What is that feeling which causes man instinctively to shudder as he stands on the border of the grave?

—"Why shrinks the soul
Back on herself, and startles at destruction?"

It is a feeling which ranges through all orders of intellect and all orders of society, all religions and sects—the pagan and the Christian, the Mohammedan and the Jew. Philosophers have stepped forward, and, with something like courage, they have spoken of death as the great vestibule which leads to immortality; but we have seen them shudder and shrink back aghast, and their philosophy was tinged with gloom.

Poets—Blair, Young, Gray, the Montgomerie, and Bryant—have broken the silence of the graveyard with the wild and fitful murmurings of their harps; but the wild notes were only as the gusts of mournful wind which sweep round the sepulchre, and breathe a balmy sadness over the peopled solitude.—Young, Blair, and Porteus, will be quoted as contradictory of this: it will be said they sung a lofty pean of triumph, and their songs were not the songs of death. Yes, but they did not set their foot upon corruption: they walked round the grave and sang; their spirits should have entered the grave; they should have flashed the fires of immortality on the very place of worms; they should have torn down the mystic curtain, and shown that death is actually not dreadful; that death has actually no power; that universally as the spirit of corruption reigns, the spirit of immortality starts with flashing pinions from the ashes of corruption; that every sad rite and funeral solemnity, every solemn marble and falling tear, every national funeral ceremony, is the proud and towering evidence of death's defeat; that annihilation is a thing unknown through all the range of finite and infinite; that destruction is renovation, and renovation immortality. And this can be shown. It can be seen that all burial-rites are *holy* solemnities. Ay, holy! for fantastical and superstitious as they may seem, they all contain one grand assumption: that at the cessation (shall we thus call it?) of man's existence, his vital part returns to its grand and primal origin. If the followers of Thales interred in water, it was because water was believed to be the origin of all things, and the destiny of man. Why



Egyptian Funeral Procession.

did the disciples of Heraclitus build the high funeral pile, and why, amid sacrificial incense, did they burn their friends upon it? Was it not because they believed the human soul to be a thing of flame, born and cradled (so to speak) in fire? If the Romans flung the rose upon the grave, that it might shed its fragrance there; if the Greeks laid around it the amaranth and the myrtle; if they built the funeral pyre of sweet fuel—the evergreen-trees, the cypress, the fir, the larix, and the yew—did they not thus give an evidence of their hope and belief in immortality, and show that they indulged the sweet expectation of meeting the departed loved ones over again? Nay, was not every custom a symbol, and every ceremony a type? If, when the pyre was kindled, the face was averted from the spectacle, was it not to show the grief with which they ministered the melancholy office? Yet, as they were commanded in performing the ceremony to lift the eye upward toward the blue heavens, was it not to evidence the expectation of reunion there?

The first cemetery of which we have any notice is that which existed beyond the lake Acherusia, or Acharejish, in Egypt, which name signified the last state of man. This cemetery and its various ceremonies laid the foundation of many of the notions connected with Egyptian and Grecian mythology: the lake we have mentioned gave rise to the fable respecting Acheron. On the borders of the lake Acherusia, a tribunal composed of forty-two judges was established, to inquire into the life and character of the deceased: without this examination a corpse could not be carried

to the cemetery beyond the lake. If the deceased had died insolvent, the corpse was adjudged to the creditors, in order to oblige his relatives and friends to redeem it. If his life had been wicked, the privilege of burial was refused to it, and it was carried and thrown into a large ditch, called Tartar, on account of the lamentations this sentence produced among the friends and relatives of the deceased. The Greek Tartarus had its origin in this Egyptian one. If no accuser appeared, or if the accusations were found groundless, the judges decreed the regular burial, and an eulogium on the deceased was pronounced amid the applauses of the bystanders: in this eulogy his talents, virtues, accomplishments, everything, except his rank and riches, were praised.

To carry the corpse to the cemetery, it was necessary to cross the lake, and to pay a small sum for the passage. This circumstance has been carefully transplanted into the Grecian mythology. The cemetery was a large plain, surrounded by trees and intersected by canals, to which was given the appellation Elisout, or Elisieus, meaning *rest*. Every one recognises in this description the Greek Charon, his boat, his ferry-money, and the Elysian fields. The whole ceremony of interment seems to have consisted in depositing the money in an excavation made in a rock, or under the sand, which covered the whole Elisout; then the relatives of the deceased threw three handfuls of sand as a sign to the workman to fill up the cavity, after uttering three loud farewells.

One of the customs relating to the dead which has obtained among all nations, is that of *mourning*. As a custom it is very ancient: the oldest records bear some notices of the modes of mourning for the dead. Abraham mourned for Sarah, Joseph mourned for his father, and the children of Israel mourned thirty days for Moses. The origin of wearing a different dress arose doubtless from the circumstance of the carelessness and indifference which was engendered by death in the family. The colors of mourning are different in different countries. In Europe and America, the ordinary color for mourning is black; in China, it is white, a color that was the mourning of the ancient Spartan and Roman ladies; in Turkey, it is blue or violet; in Egypt, yellow; in Ethiopia, brown; and kings and cardinals mourn in purple. Every nation gave a particular reason for the particular color they assumed in mourning. Black, which is the privation of light, indicates the privation of life, and white is an emblem of the purity of the spirit separated from the body; yellow, is to represent that death is the end of all our earthly hopes, because this is the color of leaves when they fall, and flowers

when they fade; brown, denotes the earth to which the dead return; blue is an emblem of happiness, which it is hoped the deceased enjoys; and purple or violet expresses a mixture of sorrow and hope.

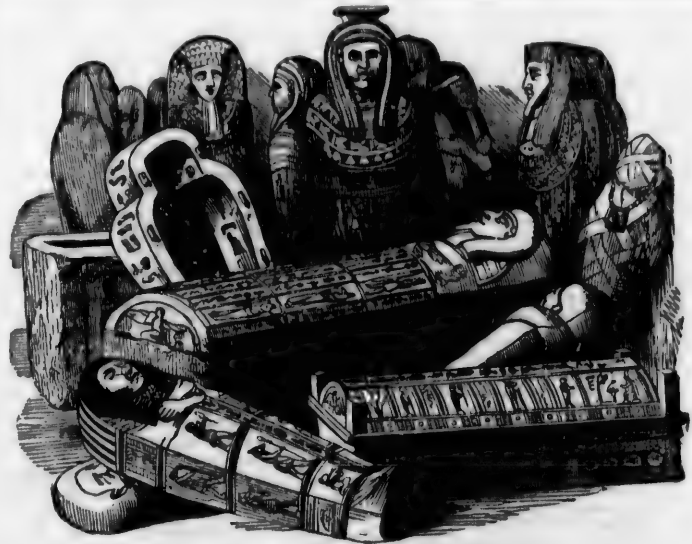
There were various ways among the ancients of mourning. The monarch laid aside his robe and crown, and various insignia of royalty; the people rent their clothes, beat upon their breasts, wore sackcloth, and sat in ashes. A public mourning was sometimes celebrated by a general fast; and when such an event took place at Rome, all the shops were closed, the senators laid aside their laticlavian robes, the consuls sat in a lower seat than usual, and the women put aside all their ornaments. There was a remarkable practice among the ancient soldiers of mourning for their fellows: the whole army attended the funeral solemnities with their arms turned upside down. An Irish funeral is of all funerals one of the most singular. It is the highest point of ambition among the children of the "Emerald Isle" that they may have an "easy death and a fine funeral." They deny themselves innumerable comforts in life, in order that they may enjoy themselves after death: their shroud and burial-dress are frequently in readiness for them several years before they are required, and the headstone for the grave frequently may be seen ready in the cottage, and the Irishman gazes upon it with ecstatic rapture when he remembers how nice and neat it will look when it marks his burial-place. There are no people who seem to look forward to death with so little dread as the Irish; they look upon the day of their death as a grand gala-day, and it is the great object of their lives to make all possible provision for it. The funeral-procession in Ireland always bears more resemblance to an electioneering ceremony. The Irish funeral-howl is notorious; and although this vehement vociferous expression is on the decline, there are still a race of women, called "Keeners," or mourners by profession. A late traveller has been curious to obtain information relating to them, and describes some of them as very extraordinary characters, having memories exceedingly powerful, voices singularly harmonious and strong, and an intellect by no means weak.

In Spain, a widow passed the first year of her mourning in a chamber hung with black, into which daylight was never allowed to enter. When this lugubrious year was ended, she changed it for one hung with gray, into which she sometimes admitted an intrusive sunbeam; but in neither chamber did custom allow her a looking-glass, nor anything but actual necessities. This victim to custom was immediately released if she obtained another husband. In some parts of Africa, the

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Mummy-Cases and Marble Sarcophagi.

husband is no sooner dead, than his wives, concubines, servants, and horses, are strangled, under the impression that they will render him the same services in a future life which they rendered him in his past. In Darien, when a widow dies, such of her children as are too young to provide for themselves, are buried with her in the same grave. At the cape of Good Hope, in order that widows may not impose themselves on men as virgins, they are obliged to cut off a finger for every husband that dies. Some of the American Indians lay their dead bodies upon scaffolds, where they erect seats for the mourners, who go every day and sit for a considerable time and howl for them; but if they can not howl themselves, they hire persons to howl in their stead. Herodotus mentions, that among the ancient Cretomians (a people of Thrace), widows, assisted by their relatives, made interest who should be preferred to the honor of being killed on the grave of their dead husband. Some ancient nations dressed themselves as women when they lost their relatives, in order, it is related, that the ridicule attached to their vestments might make them ashamed of their grief. The Abyssinians mourn for their dead many days, beginning their lamentations with the morning and continuing them till night, when the nearest relatives and friends of the deceased assembled at the grave, together with

several hired female mourners, who join the solemnity with shrieks, also clapping their hands, smiting their breasts, and uttering the most doleful expressions of grief. When a person of ordinary rank dies at Guinea, his friends and neighbors set up a loud cry round the corpse, carrying it into the open air, and asking it the cause of its death, and whether it perished through the want of food or not, or from the effects of necromancy.

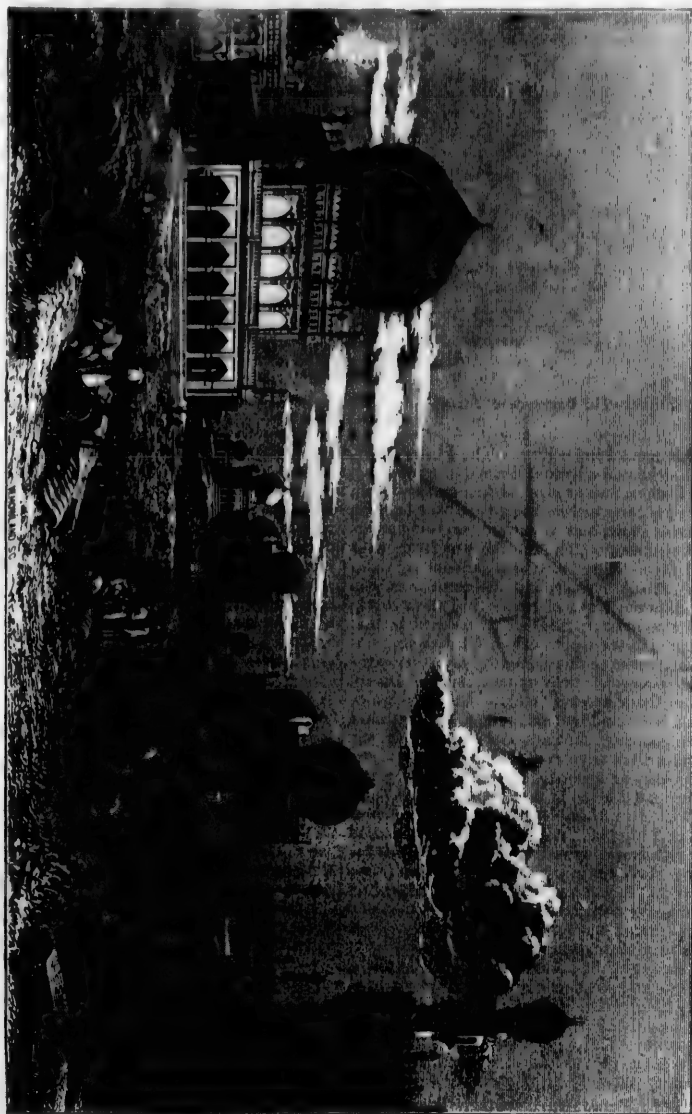
The origin of embalming seems to us to be mysterious; it undoubtedly originated in a wish to preserve the objects of affection and love; and there can be little doubt that the Egyptians were the first who practised the art. It has generally been considered the highest point of internal civilization, and to be met with only among those people on whom the light of science had been poured; but, strange to say, the custom has been found prevalent in the islands of the Southern ocean, and that too with many of the attendant circumstances which marked the Egyptian embalmments. The customs prevailing at Tahiti, on the death of a person of distinction, are in the highest degree appalling: the fearful manner in which the natives cut themselves with knives excites horror in the mind; their superstitious mode of burying the sins of the dead are subjects of deep and fearful interest alike in the annals of man's external history, and the memorials



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Tombs of the Kings of Coloma.





EMBALMING.—The Processes of Bandaging and Painting an embalmed Body: designed from the ancient Egyptian Monuments.

of his mental imbecility. The Peruvians, it seems, had an effectual method of preserving the bodies of their incas or kings; their main secret is supposed to have been the burying them in snow, and afterward applying a certain bitumen, which kept them as entire as if still alive. The Jews (as we are told by Camden), the Assyrians, and the Scythians, had all different ways of preserving their dead; but the most extraordinary method is that adopted in the monastery of St. Bernard. It is the custom of that fraternity to preserve the dead bodies of their monks, and afterward place them erect in niches along the walls. This is effected by baking them in a very slow oven contrived for the purpose, and they will remain thus preserved for centuries without changing, or becoming in the least offensive. They are dressed in their hoods and cloaks.

The word *Mausoleum* originates from Mausolus, a king of Caria, to whom a sumptuous sepulchre was raised by his wife Artemesia. King Mausolus is said to have expired in the year 353 B. C.; and his wife was so disconsolate at the event, that she drank his ashes, and perpetuated his memory by the erection of this monument, which became so famous as to be esteemed the seventh wonder of the world, and to give a generic name to all sepulchres. The mausoleum of the Taaie Mahal stands in the neighborhood of the city of Agra, and as a mausoleum it has not its equal in the world. It is described as the realization of a fairy temple, personifying all the beamy dreamings of Arabian enchantment. It stands in the midst of the desert, where rudeness and desolation reign: the gate leading to it, is a building which in any other place the traveller

would stay to gaze on and admire, but scenes beyond attract his notice. The entrance is a palace of deep red stone inlaid with white marble. Oriental architecture has here lavished all its powers, especially in the domed room, the circular hall, and the wide-stretching gallery. The place of actual sepulture is of a chaste and matchless beauty around it on three sides are suites of apartments, consisting of three rooms in each, all of white marble, having lattices of perforated marble for the free transmission of air, and opening to the garden; the window-frames are of marble; and altogether this superb piece of art impresses the mind of the beholder with an overwhelming feeling of amaze that such a building should be a monument to death.

Golconda, near which are the tombs represented in one of our engravings, is a fortress of Hindostan, formerly the capital of the province of the same name. It is the residence of the kings. This fortress, for extent, might be called a city, in the middle of which rises a hill like a sugar-loaf. It is esteemed by her natives impregnable, but is extremely hot and unhealthy. It is now the repository of the wealth of the Nizam. The principal mineral production of this country is that most invaluable of gems, the diamond. It is generally found in the narrow crevices of the rocks, loose, and never adherent to the strong stratum. The miners, with long iron rods, which have hooks at the end, pick out the contents of the fissures, and wash them in tubs, in order to discover the diamonds. Hindostan is famous for its diamond-mines. In Calour, near Golconda, they dig in a large plain to the

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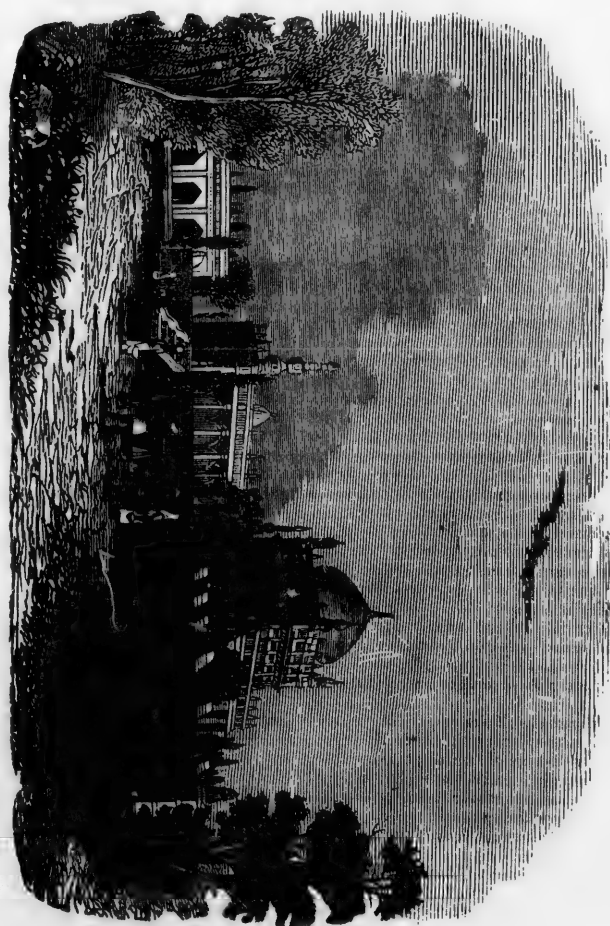


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Tomb of Hyder Ali.



depth of ten or fourteen feet: forty thousand persons are employed, the men to dig, and the women and children to carry the earth to the places in which it is to be deposited before the search is made. Diamonds are also found in the gravel or sand of rivers, washed out of their beds and carried down with the stream. The river Gonel, near Sumbulpour, is the most noted for them. Many other precious stones are found in this country.

Beautiful, indeed, are the environs of Golconda, adorned with the tombs of her former rulers! Magnificent mausoleums of marble and gold—marble wrought with the finest chiselling—woodwork where the delicate tracery of the carver is covered over with rich gold, so that the whole seems as if wrought in the priceless gold-mines of the world! The architecture of these noble monuments of former times, although neither Ionic, Gothic, nor Corinthian, is at once impressive and effective. In fact, all the monuments of the Hindoos seem calculated to inspire the beholder with awe and admiration. While the domes of their buildings do not compare in symmetry and geometrical accuracy of measurement with the far-famed dome of St. Peter's, yet the eye of the beholder is dazzled, and, after gazing in mute admiration upon them for hours, he turns away dissatisfied, only to look back again.

There are many tombs near Golconda;—twelve of these, however, are lofty and sublime in appearance; and when their domes are gilded by the rays of the setting sun, and the scene is rendered lifelike by the presence of a caravan of camels, loaded with the rich treasures of the eastern world—men dressed in gay costume, or resplendent with the glitter of burnished armor—truly may we say, "GOLCONDA! thy diamonds glitter in the mines: but even on the surface are gems of priceless value!"

When the reader looks upon the tomb of Hyder Ali, the splendid pile of building will remind him of one of the most remarkable men, for such he really was. Its occupant rose from a situation of the most absolute obscurity; and gradually passing, as by an inclined plane, to the command of the army, he deposed the rajah Nunjerej, and was chosen to govern the destinies of India. Hyder Ali died at the advanced age of eighty.

The engraving represents the superb place of sepulture in which both Hyder Ali and his son, Tippoo Saib, are deposited. To attempt a description of this illustrious mausoleum, would, indeed, be preposterous. The best description is that afforded by a view of the engraving; but all, all is faint, save the vast original.

Morai is the name given at Otaheite, in the

South-sea islands, to the large burial-grounds, which were formerly places of public worship. One of their most sacred places consisted of a pile of stone raised pyramidically upon an oblong base. On each side was a flight of steps; those at the sides being broader than those at the ends, so that it terminated, not in a square of the same figure with the base, but in a ridge, like the roof of a house. There were eleven of these steps to one of these morais, each of which was four feet high; so the height of the pile was forty-four feet. Each step was formed of one course of white coral stone, which was neatly squared and polished. The rest of the mass—for there was no hollow within—consisted of rounded pebbles, which, from the regularity of their figure, seemed to have been wrought. The foundation was of rock-stones, which were also squared. In the middle of the top stood the figure of a bird carved in wood, and near it lay the broken one of a fish carved in stone. The whole of this pyramid made part of one side of a spacious area or square, three hundred and sixty feet by three hundred and fifty-four, which was walled in with stone, and paved with flat stones its whole extent. About a hundred yards from this building was another paved area or court, in which were several small stages raised on wooden pillars, about seven feet high, called by the Indians ewattas.

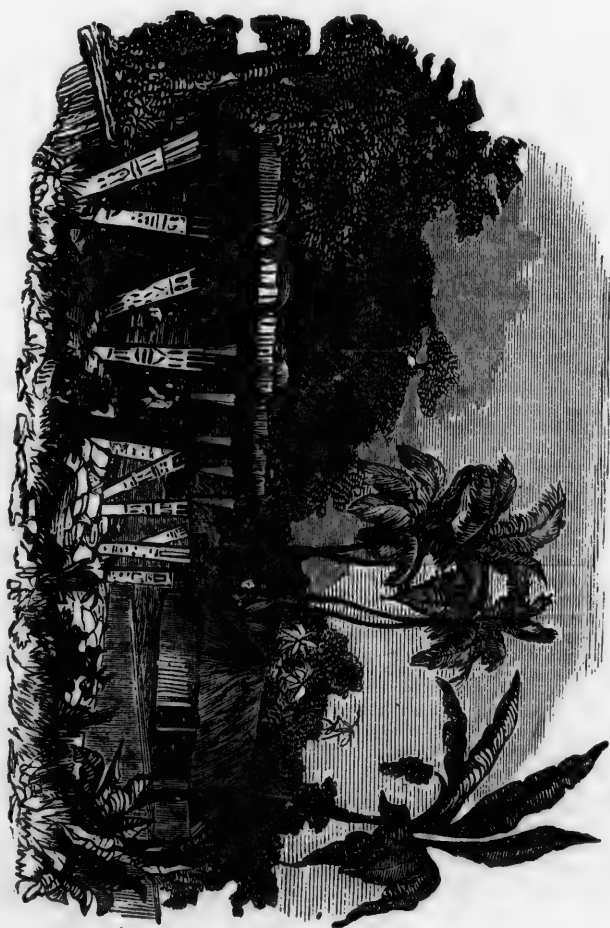
To stand round an open grave in a country churchyard; to hear the dust rattle on the coffin-lid; the deep, stifled sob, the roll of the muffled bell, and the deep voice of the stoled priest—all these give solemnity to the impressive service. But a burial by land is not so solemn as a burial by sea. There is something in that event peculiarly impressive: the winds whistling through the flapping shrouds above, and the solemn voice of the waves dashing against the vessel beneath,—these make the music of the service, and ring the dirge and the requiem over the departed. In the former case, the dead one is laid to rest with his fathers, in conformity with the usages of society, beneath the green turf, perhaps in the quiet valley where he first breathed life's breath: at any rate, in the land of his birth—his own country. But in the latter, there is no green mountain swelling in the distance, no sloping valley nor church-turret; but all along the horizon swells one vast waste of waters, and as far as the eye can reach it glances over the blue and bounding waves. And no fringed pall is there: the national banner circles his form for a winding-sheet, and his last bed is his coffin. And who shall stand and gaze on the scene, and say that sailors have not the hearts of other men, when around the simple burial? You may see the forms of men marked with the scars of honorable

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Morai of Owyhee



war, and many a one raising his coat to wipe away the tear that can not be suppressed. And where should be the sailor's grave, but beneath those billows over which he so triumphantly rode? His career was unchained—so let his grave be! He goes down to a "depth which no plummet, save God's omnipresence, has ever fathomed;" and if loathsome things creep over him, will he heed their assaults, secure in his last repose? And may we not then echo the question of the poet Howitt—"Will he rise less joyfully when the last trumpet rings over the waters, than those who laid them down in the ornamented cemetery?" We trow not.

But one of the most interestingly solemn scenes in which we can wander is a village churchyard. Indeed, our readers know that the poet's harp rung in solemn strains amid its simple tombs. Our poets have dwelt in pensive, beautiful melancholy, reflecting on its scenes—the once-busy and agitated hearts which lie beneath the sod, and the balmy tranquillity—emblem of a deeper repose—which Nature flings over the spot. And a burial-place is, of all others, the most soothing. That is a fine expression in the book of Job—"there the wicked cease from troubling, and the weary are at rest." It is a beautiful thought: their hearts so still, so tranquil, were agitated as much as ours; their heads were the seats of thought; their arms and legs were once active; their eyes could once drink in the beauties of nature's scenery; their hearts were susceptible of the same emotions as ours: they stood perhaps in this very churchyard, and felt, as they looked on surrounding graves, the same emotions which we feel! A few years, and another generation will stand in the churchyard, and we shall be in our graves. And when our minds revert to burials, to monuments, and to burial-customs, by what variety are we surrounded! The lonely mound, the stranger's grave, where no daisy blooms, no cypress hangs, no mourner weeps; the neat sepulchral stone, with the trimmed grass, and perchance a flower showing its mild beauty on the brow of death. Then the monumental pile, the flattering epitaph, the entablature of ancestral birth and daring deeds. Can we go further than this? Oh, yes: the proud mausoleum, more like a palace than a place of bones; where the Parian marble gleams in its whiteness, and the sculptor's noble effigies seem almost to breathe in stone; but of the slumberers beneath it may be said—

"The storm which wrecks our wintry sky
No more disturbs their deep repose
Than summer evening's latest sigh,
When shuts the rose."

There are some spectacles in the world from which one shrinks back with horror, while oth-

er circumstances would only create in our minds a feeling of complacent delight. Such a spectacle is the crowded metropolitan churchyard. The feelings it excites are truly indescribable. The crowded seat of vestilence and death, the torturing memento of the miseries of life, with no whisper of the repose which is beyond; oh! one shrinks from burial in such a town, more than from death itself. But a village churchyard—and often have we leaned over its gravestones, and sighed to think that we were not as those beneath us—there is nothing so sweet as a country churchyard. By moonlight the beams rest on the neat graves and fall on the tombstones, like faith conquering doubt; and ever and anon, as some fitful breeze sweeps by, making sad melody, the voices of the dead seem to speak in each hollow gust: while, round the old gray church-tower, standing secure in its hoary solitude, their spirits seem to walk, "breathing fresh beauty amid the gloom of graves."

BLANKETS.

How the casements rattle! and hark, how the bitter, biting blast whistles among the trees! It's very cold, and soon it will be colder. We could shiver at the thought of winter, when the icicles hang from the water-butt, when the snow lies deep upon the ground; and the cold, cold wind seems to freeze the heart as well as the finger-ends.

Yet, after all, the darkest night, the bitterest blast, and the rudest storm, confer some benefit, for they make us thankful for the roof that covers us, the fire that warms us, and for the grateful influence of a comfortable bed.

Oh, the luxury of a good, thick, warm pair of blankets, when the wintry blast roars in the chimney, while the feathery flakes of snow are flying abroad, and the sharp hail patters against the window-panes!

Did you ever travel a hundred miles on the outside of a coach, on a sharp frosty night; your eyes stiffened, your face smarting, and your body half petrified? Did you ever keep watch in December in the open air, till the more than midnight blast had pinched all your features into sharpness; till your feet were cold as a stone, and the very stars appeared as if frozen to the sky? If you have never borne these things, we have; but what are they compared with the trials that some people have to endure?

Who can tell the sufferings of thousands of poor people in winter, from the want of warm bed-clothes! and who can describe the comfort that a pair or two of blankets communi-

cate to a destitute family! How often have we seen the wretched children of a wretched habitation, huddling together on the floor, beneath a ragged great-coat, or flimsy petticoat, striving to derive that warmth from each other which their scanty covering failed to supply.

In many places, benevolent persons give or lend blankets to the poor, and thus confer a benefit, the value of which can hardly be told. May they be abundantly repaid by the grace of that Saviour who said, when speaking of kindnesses done to his disciples: "Inasmuch as ye have done it unto one of the least of these, my brethren, ye have done it unto me."

"Think of these things now, for it will be of no use to reflect on them in summer. Charity is never so cordial as when she feels the misery she relieves: while you feel the cold, then, do something to protect others from the inclemency of the season. It is enough to be ill-fed, and ill-clothed, and to sit bending over a dying fire without a handful of fuel to revive it; but after that to pass the night without a blanket for a covering, must indeed be terrible.

See, in the sharpest night the poor old man, over whose head threescore and ten winters have rolled, climbing with difficulty his narrow staircase, to creep beneath his thin and ragged coverlet. See the aged widow, once lulled in the lap of luxury, but now worn by poverty to the very bones, stretching her cramped limbs upon her bundle of straw. Fancy!—but why fancy what you know to be true—these poor, aged, miserable beings having to shiver through the livelong night, when a blanket would gird them round with comfort. We could weep at such miseries as these—miseries which so small an effort might relieve. The table-crums of the rich would make a banquet for the poor, and the spare remnants of their clothing would defend them from the cold.

Come, come, reader! you are not without some feeling of pity and affection for your fellow-creatures. Be not satisfied in wishing them well; let something be done for their welfare.

If there be a heart within you, if you have a soul that ever offered up an expression of thanksgiving for the manifold mercies which your heavenly Father has bestowed upon you, then sympathize with the wretched, and relieve, according to your ability, the wants of the destitute. Let me beseech you to do something this very winter toward enabling some poor, aged, helpless, or friendless person, who is slenderly provided for, to purchase a blanket. You will not sleep the less comfortably, when you reflect that some shivering wretch has been, by your assistance, enabled

to pass the wintry night in comfort. It is not a great thing that is required; do what you can, but do something. Let us not plead in vain; and shame betide us, if we neglect to do, ourselves, the thing that we recommend to you to perform.

Did you ever lie snug and warm, in bleak December, the bedclothes drawn close round your neck, and your nightcap pulled over your ears, listening to the midnight blast, and exulting in the grateful glow of your delightful snugger? We know you have, and we trust, too, that the very reading of these remarks will affect your hearts, and dispose you to some gentle deed of charity toward those who are destitute of such an enjoyment.

Now, then, while the subject is before you, while you look round on your manifold comforts, while you feel the nipping and frosty air, resolve, ay, and act, in a way that will bless others, and give comfort to your own heart.

Youth and health may rejoice in frost and snow, and while the warm blood rushes through the exulting frame, we can smile at the wintry blast; but age, sickness, and infirmity, can take no exercise sufficient to quicken the sluggish current of their veins. Wrap them round, then, with your charity, help them to obtain a pair of warm blankets, and the blessing of the widow and the fatherless, the aged and infirm, the destitute, and those ready to perish, shall rest upon you.

CHRISTMAS IN GERMANY.

IN Germany, the custom extensively prevails, of placing, at Christmas, a small evergreen tree in every house, and after covering its branches with various presents intended for the children, to suspend numerous little lamps or tapers to all parts of it, and late in the evening, to exhibit it to the assembled family. As the presents are marked with the names of the donors as well as those for whom they are intended, the occasion excites much interest; and it will be found that Germans generally cherish the recollection of the annual festival with lively pleasure. It is not uncommon to find instances in which this custom has been observed in this country, either by Germans or by their imitators. The tree usually chosen being the silver fir, which is remarkable for the great number and uniformity of its twigs and branches, the sight is often a striking and beautiful. The gay and varied colours of the little gifts strongly illuminated by the blazing lamps, and relieved by the dark foliage of the evergreen, have quite a

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Laier and his family with their Christmas Tree.

rich and dazzling effect; and the feelings of generosity and gratitude shared by the members of a happy family circle, are such as must render the scene doubly agreeable. Of the date or origin of the custom, we are not informed: but while we refer it to those periods when religious occasions were first connected with observances with few or no traces of their Christian associations, we admit that this is one of the most harmless kind. It would indeed have been better if those who thought it a duty to commemorate Christmas had adopted some mode adapted to direct the mind to the character, doctrines, or objects of the Savior: but we can not look upon the picture we have given, and see Luther with his family, with a Christmas-tree blazing before them, without some impressive recollection of him and the peculiar period in which he lived.

CUSTOMHOUSE, PHILADELPHIA.

FORMERLY UNITED STATES BANK.

THIS is one of those chaste and beautiful buildings which have given the public architecture of Philadelphia a superiority over that of every other city of our country. It needs but that its fair marble should be weather-fretted and stained, to express perfectly to the eye the model of one of the most graceful temples of antiquity. The severe simplicity of taste which breathes through this Greek model, however, is not adapted to private buildings; and in a certain kind of simplicity, or rather want of ornament, lies the fault found by every eye in the domestic architecture of this city. The chess-board regularity of the streets, so embarrassing to a stranger, as well as tiresome to the gaze, require a more varied, if not a more ornate style. The hundreds of houses that resemble each other in every distinguishable particular, occasion a bewilderment and fatigue to the unaccustomed eye, which a citizen of Philadelphia can scarcely comprehend.

The uniformity and plainness which William Penn has bequeathed in such an abiding legacy to Philadelphia, however, is seen but by a faint *penumbra* in the dress of the inhabitants, or in their equipages, style of living, and costliness of furniture and entertainment. A faint shadow of original simplicity there still certainly exists, visible through all the departures from the spirit of Quakerism; and it is a leaven of taste and elegance in the ferment of luxury which has given Philadel-

phia emphatically a character for refinement. A more delightful temper and tone of society, a more enjoyable state of the exercise and mode of hospitality, or a more comfortable metropolis to live in, certainly does not exist this side the water. A European would prefer Philadelphia to every other residence in the United States.

Everybody has heard of the celebrated but unfortunate United States bank, from its connexion with the government, as its former fiscal agent. At the time of its dissolution it was operating under a charter from the state government, under the title of "The United States Bank of Pennsylvania," with a capital of \$30,000,000. Its original capital was \$35,000,000, which was distributed between the parent bank and nineteen branches.

The corner-stone was laid in April, 1819, and the whole was finished near the close of 1824. The cost of the ground was \$155,628—of the structure itself, \$257,452—making an aggregate of \$413,081; an expense which may be regarded as very moderate, when we consider the great mass of materials which it contains; there being not less than 41,500 cubic feet of marble in the porticoes and walls—about three millions of bricks, three thousand perches of building-stone, and seventeen and a half tons of copper on the roof.

In choosing the situation of such a building, its centrality and its convenience for business were of course more important considerations than picturesque effect; and the lot—a parallelogram of 152 feet by 225—is, on that account, more circumscribed than would be desirable. This defect was to be obviated by placing the structure as far as possible from the street—by insulating it entirely—by interposing nothing between the spectator and the building—and by raising the foundation so as to acquire for the whole an artificial elevation, which to the eye would produce the effect of distance. Accordingly, in the centre of the ground is constructed a terrace, 3 feet high, 119 feet in front, and 225 in depth, serving as the foundation from which, at the distance of 16 feet from its front and flank edges, the building rises. It occupies 87 feet in front, and 187 feet in depth, including the steps, or 161 feet excluding them. On reaching the terrace, which, in order to preserve its form entire, is done by steps in the rear of the gateways, the building is approached by a flight of steps along the whole front—13 in number, and occupying 13 feet in depth. These lead to the portico, which has a basement of 10 feet 6 inches in width, on which stand eight Grecian Doric columns, 4 feet 6 inches in diameter, 27 feet in height—fluted, and without bases, and supporting a simple entablature and a pediment, which, like the roof, has just

that degree of elevation necessary to carry off the water—the vertical angle being 153 degrees. Behind the columns, and at the due distance from them—the width between the two columns at the end of the portico—is the wall of the building. The door opens upon a vestibule of 30 feet by 18 in width, the ceiling of which is richly worked, and the pavement tessellated with American and Italian marble.

The structure is copied after that of the Parthenon at Athens—the colonnades on the sides, and certain other merely decorative parts of the original being dispensed with in the copy, on account of the size and structure of the lot upon which it is erected. The exterior is of the Doric style, from the richest materials of American and Italian marble.

The large banking-room is situated in the centre of the building, and extends 48 feet in breadth, and 81 in length. Through the whole of this length, on each side, at the distance of ten feet from the walls, is a range of six fluted Ionic columns, twenty-two inches in diameter. The entire building is justly regarded as one of the finest specimens of Grecian architecture in the country. The interior is vaulted throughout, and arched, so as to be entirely fire-proof, and the roof is coppered.

The rooms are warmed by a furnace below, the heat from which diffuses an equal temperature throughout its whole extent, while in summer the massiveness of the structure preserves its coolness.

From this sketch may be gathered the degree of its resemblance to the ancient temples, and especially to the Parthenon, from which some of its proportions are taken. In its general dimensions it is much larger than the Temple of Theseus at Athens, and smaller than the Parthenon. Their respective proportions are these:—

	Front, excluding steps.	Length, excluding steps.
Temple of Theseus, 45 ft. 2 in.	104 ft. 2 in.	
Parthenon, 101 ft. 1 in.	237 ft. 7 in.	
U. S. Bank, 87 ft.	161 ft.	

making the Parthenon 14 feet 1 inch wider, and 66 feet 7 inches longer than the bank; but as the Temple of Theseus has only two steps, and the Parthenon only three, while the bank has 13, extending 13 feet on each front, the length of the buildings, respectively, including the steps, would be considerably varied, the length of the bank from the outer step being 187 feet, that of the Parthenon, 236 feet 9 inches. The comparison may be best illustrated by the fact that the Parthenon, with its steps, covers an extent of ground nearly, but not quite equal, to the area of the terrace of the bank.

As, however, the double row of columns in the portico and the flanking colonnade required so much space, the actual dimensions of the interior of the two buildings are much more nearly equal than these proportions would indicate. Thus: the enclosed part of the Parthenon was in width 70 feet 6 inches; in length, 158 feet 7 inches; and the whole area of the enclosure was therefore 11,181 feet; while the enclosure of the bank is in width 87 feet; in length, 141 feet; making an area of 12,267 feet, or, 1,806 feet more than that of the Parthenon.

The interior of the Parthenon, after deducting the pronaos and posticum at the two ends, occupying 12 feet each, was divided into two rooms, the treasury or opisthodomos, of 62 feet by 42 feet 10 inches, and the great central hall, the scene of all the exhibitions, which was 98 feet seven inches by 42 feet 10 inches, while the banking-room is 48 feet by 81, giving an area very nearly equal.

The principal differences between the two buildings are these. The Parthenon had a colonnade on the flanks, which here is wanting. This beautiful ornament was omitted for the reason already stated; and we may reconcile ourselves to the loss of it, by the reflection, that in a building destined to receive its light from the side, it might have too much overshadowed the scene of business. The Parthenon has been regarded as what is technically called hypæthral—that is, having its roof open in the centre, as would be the middle aisle of a modern church. Recent observations by detecting something of the later ages in the columns of the interior, have excited doubts as to this fact, which the present dilapidation of the building will for ever render inexplicable—but the probability is, that the light of the Parthenon came from the roof, not from the sides—and the flanking colonnade would, on that account, present no inconvenience.

The Bank of the United States, previous to the erection of the present edifice, occupied the building which it owned on South Third street, and which was purchased by Stephen Girard, and occupied as his banking-house until his death. That building was erected in 1795. The portico is of Pennsylvania marble, but the rest of the building is brick. The entrance is capacious and beautifully ornamented with splendid fluted columns, and caps of the Corinthian order. It is at present occupied by the Girard Banking Company.

Is it possible to realize, that, on the site of the refined city of Philadelphia, only one hundred and fifty years ago, lived a people in such strong contrast to the above (save only in hospitality), as are described by William Penn, in the following terms:—

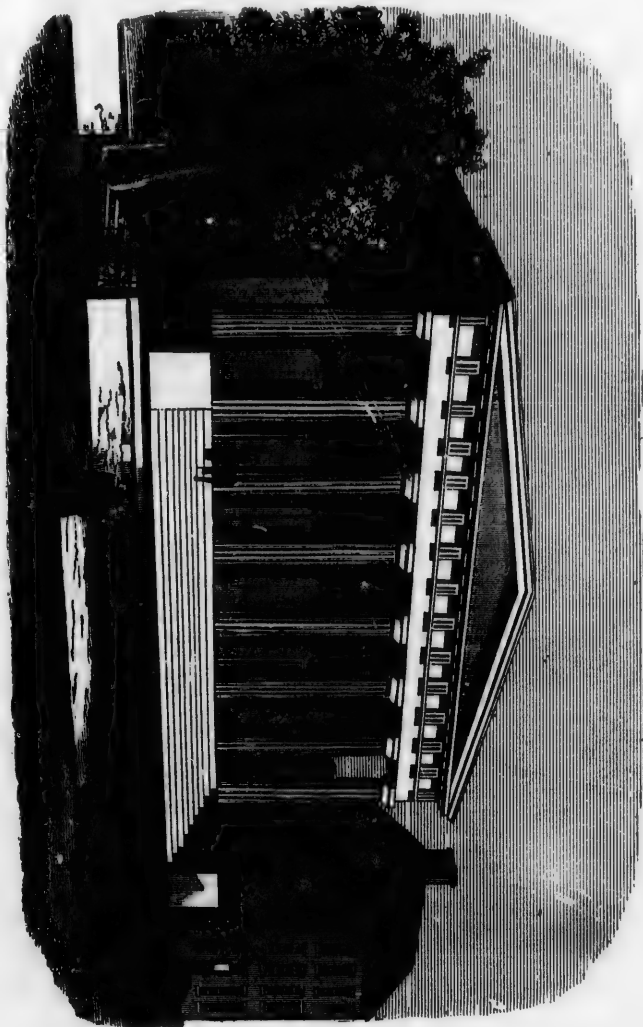
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Custom House, Philadelphia, (formerly the United States Bank.)



"The natives I shall consider in their persons, language, manners, religion, and government, with my sense of their original. For their persons, they are generally tall, straight, well-built, and of singular proportion; they tread strong and clever, and mostly walk with a lofty chin. Of complexion, black, but by design, as the gypsies in England: they grease themselves with bear's fat, clarified; and using no defence against sun or weather, their skins must needs be swarthy. Their eye is little and black, not unlike a straight-looking Jew. The thick lip and flat nose, so frequent with the East Indians and blacks, are not common to them; many of them have fine Roman noses.

"Their language is lofty, yet narrow; but like the Hebrew, in signification full. Like short-hand in writing, one word serveth in the place of three, and the rest are supplied by the understanding of the hearer; imperfect in their tenses, wanting in their moods, participles, adverbs, conjunctions, and interjections.

"Of their customs and manners there is much to be said: I will begin with children. So soon as they are born, they wash them in water; and while very young, and in cold weather, they plunge them in the rivers, to harden and embolden them. The children will walk very young—at nine months, commonly: if boys, they go a fishing till ripe for the woods, which is about fifteen; then they hunt, and after having given some proofs of their manhood by a good return of skins, they may marry; else it is a shame to think of a wife. The girls stay with their mothers, and help to hoe the ground, plant corn, and carry burdens: and they do well to use them to that young, which they must do when they are old; for the wives are the true servants of the husbands, otherwise the men are very affectionate to them.

"When the young women are fit for marriage, they wear something upon their heads for an advertisement, but so as their faces are hardly to be seen but when they please. The age they marry at, if women, is about thirteen and fourteen; if men, seventeen and eighteen; they are rarely older.

"Their houses are mats, or barks of trees, set on poles, in the fashion of an English barn, but out of the power of the winds, for they are hardly higher than a man: they lie on reeds, or grass. In travel, they lodge in the woods, about a great fire, with the mantle of duffils they wear by day wrapped about them, and a few boughs stuck round them.

"Their diet is maize, or Indian corn, divers ways prepared; sometimes roasted in the ashes; sometimes beaten and boiled with water, which they call *hommony*; they also make

cakes not unpleasant to eat. They have likewise several sorts of beans and peas that are good nourishment; and the woods and rivers are their larder."

THE HEAD AND THE HEART.

THE first thing we do with children is, to develop their intellects. Let a boy say a sharp thing, let him show quickness, and we dream about him, and talk of him as a genius, and parent and teacher are delighted. You hear them say: "How promising—how advanced—that lad will make a man—we shall hear of him yet."

And do you hear of him? Are these very promising children the men of action? Do they fulfil, generally, any one promise they excite? We think not. And simply because we begin wrong with them, and so beginning, they end poorly. For the child *sensation* and *emotion* are everything; not reason; not reflection; task the intellect, and you cripple him for life; cultivate it chiefly or alone, and you break him down ere he reaches manhood; but quicken his senses, touch his *heart*, as you tell him of great men, of good deeds, of human endeavors, of starry skies, and the storms that sweep over them, green fields, and the humblest flower that takes root in them, and you will do more for him—more to give him character—in an hour's talk, or a day's ramble in the woods and fields, than in years of forced effort, or strained intellectual cultivation.

For the first ten years of life, the child wants physical developments and *heart-culture*. No metaphysics are needed to explain goodness. The very infant knows that at sight. No exertion of intellect is required to explain kindness. The veriest child understands that by instinct. By this goodness and kindness, then, we should lead the young on and up, and then prepare the way for harder effort and serious intellectual exertion. But these should never be anticipated; no growing child should be *forced* to reason, to study, to overload the memory with tough logic, overtask the brain with tougher abstractions; all that we should look, labor, or long for, is a full, fine physical development, buoyancy of spirit, and a heart joyous as the spring-time, with sensations keenly alive to every gentle or generous appeal, and emotions quick to answer the call or command of goodness, as the truest basis of sure future development, and a constant, ever-growing moral and intellectual power.

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Parents may think we talk at random. If so, we would urge them and teachers to ponder well the following remarks, penned by one whose life-study has been the education of the young:—

"The first eight or ten years of life should be devoted to the education of the heart—to the formation of principles—rather than the acquirement of what is usually termed knowledge. Nature herself points out such a course; for the emotions are then the liveliest and most easily moulded, being as yet unalloyed by passion. It is from the source that the mass of men are hereafter to draw their sum of happiness or misery; the actions of the immense majority are, under all circumstances, determined much more by feeling than reflection; in truth, life presents an infinity of occasions where it is essential to happiness that we should feel rightly: very few where it is at all necessary that we should think profoundly.

"Up to the seventh year of life, very great changes are going on in the structure of the brain, and demand, therefore, the utmost attention not to interrupt them by improper or over-excitement. Just that degree of exercise should be given to the brain at this period as is necessary to its health, and the best is oral instruction, exemplified by objects which strike the senses.

"It is perhaps unnecessary to add that, at this period of life, special attention should be given, both by parents and teachers, to the physical development of the child. Pure air and free exercise are indispensable, and whenever either of them is withheld, the consequences will be certain to extend themselves over the whole life. The seeds of protracted and hopeless suffering have, in innumerable instances, been sown in the constitution of the child simply through ignorance of this great fundamental physical law; and the time has come when the united voices of these innocent victims should ascend, 'trumpet-tongued,' to the ears of every parent and every teacher in the land—Give us free air, and wholesome exercise; leave to develop our expanding energies in accordance with the law of our being; and full scope for the elastic and bounding impulses of our young blood!"

Amen, say we! This is the true doctrine: not because it is the man's, or ours, but because all nature tells us it is true. First attend to the physical. That must be sound. Then look to the heart. Touch that, by all means. Go out into the fields, over beds of flowers, tell useful stories, and do whatever may impress the senses rightly, or move the heart truly, in the child; and if he live, in nine cases out of ten, he will be A MAN, and a true one to boot!

EXTENT OF THE UNITED STATES.

The present confederacy of the United States of North America contains a larger area of cultivated land and hospitable climate than any country that has previously existed. Ancient and modern empires sink into insignificance when compared with it. The United States of America contain 2,300,000 square miles, over half a million more than Europe, if we except Russia. Their greatest length is 3,000 miles, their greatest breadth 1,700 miles.

They have a frontier line of 10,000 miles, a seacoast of 36,000 miles, and an inland lake coast of 1,200 miles.

The rivers in the United States are the largest in the world. The Missouri is 3,600 miles in length, or more than twice as long as the Danube. The Ohio is 600 miles longer than the Rhine. The Hudson, entirely within a single state, is navigable 120 miles above its mouth farther than the Thames.

The state of Virginia has an area of 70,000 square miles, and is about one third larger than England; the state of Ohio 40,000 square miles, or one fourth more than the whole of Scotland; and the state of Maine upward of 30,000 square miles, or nearly as large as Ireland, which has about 8,000,000 of people.

The harbor of the city of New York is the Atlantic outlet of a river, canal, and lake navigation of about 3,000 miles, or the distance from Europe to America.

From Augusta, in the state of Maine, to New Orleans, in the state of Louisiana, the distance is 1,800 miles, or 200 more than from London to Constantinople. To go from London to Constantinople, you cross the entire continent of Europe, and through most of its principal kingdoms.

The great proportion of the whole extent of the territory of the United States is uncultivated. The population of the country, as rapidly as it increases, would not occupy all the public domain in a cycle of five hundred years; and yet, in spite of this startling fact, there are among us men claiming to be statesmen, who wish to anticipate the future, and occupy by conquest, at the expense of blood and treasure, that territory which is as certain to fall into our possession by the natural course of events, as that the sun's rising marks the beginning of day. So vast, indeed, is the territory of the United States already, that it takes no ordinary mind to comprehend its extent, and few indeed can calculate its resources; and the most comprehensive intellect can not, when warmed by a high-wrought imagination, give a faint glimmering of the future wealth and power to be accorded to the American people—not by the force of arms, but simply by the pursuit of the arts of peace.

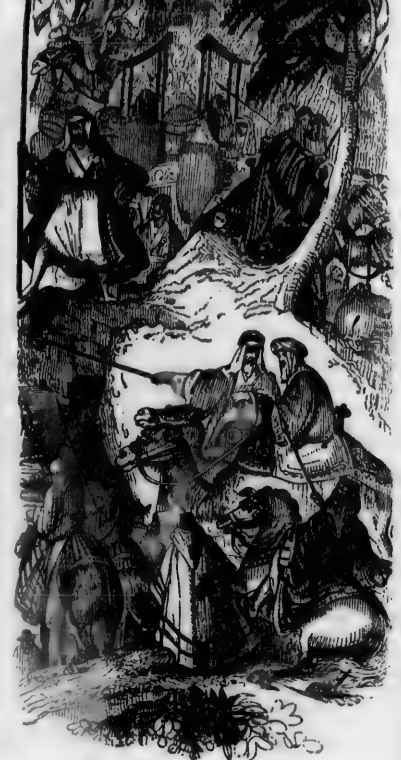


TRAVELS IN THE HOLY LAND.—NO. 1.

BY HARRIET MARTINEAU.

It was on Sunday, March 28th, that we were to enter the Holy Land. I had been too much engrossed by the objects which interested us at every step in Egypt and Arabia, to think much of this beforehand; but when I came forth from our tent in the dawn of that morning, there was enough of novelty in the scene around me to make me feel that we were about to enter upon a new country, and a new set of interests; and I became eager to know at what hour we were to pass the boundary which separated the desert from the Holy Land—the home of the old faith from that of the new. We had followed the track of Moses from the spot where his mother placed his bulrush cradle to that on which he died; for to the east we should this morning see the mountains overhanging the Dead Sea; and among them the summit of Nebo, whence he looked abroad over the Land of Promise; and now we were to enter upon the country of Jesus—certain to walk in his very footsteps, and see what he saw—perhaps this very day. I never remember feeling such an interest in every wild-flower, in the outlines of all the hills, and the track of all the water-courses.

We had left the stony desert behind us, and were encamped in a nook of the hills where the ground was green, and weeds grew thick. There was grass under my bed in the tent; and when I came out this morning, the dew was heavy on the daisies and buttercups and flowering mallows which grew abundant.



Oriental Mode of Travelling.



Camels loading preparatory to starting.

ly on the turf. After breakfast, while the camels were loading, I walked in the early sunshine on a strip of sand overlooking the valley, impressing on my memory every feature of the landscape, and impatient of the rising ground to the north, which prevented my seeing where we were going. It was about ten o'clock when we passed the boundary. It was impossible to tell the exact moment; but within a mile or two we felt that we were indeed in the native land of Christ, and probably on his very track. He might have been here. His relations lived at Hebron; and during the first thirty years of his life he had probably visited them, after meeting them at the feasts at Jerusalem. He might have walked over the hills which swelled higher and higher as we advanced, and rested beside some of the wells which yawned beside our track. At any rate, the trees and flowers which we saw must have been familiar to his eyes; the thorny acacia which began here to rise and spread from the stunted shrub of the desert to the dimensions of a tree; the scarlet anemone—with us a precious garden flower—which here strewed the ground for acres round; the cyclamen, which pushed forth its

tufts of white and lilac blossoms from under many a stone and bush; and the poppy, mallow, hemlock, and wild oats, which grew as thickly as in any English hedge. I did not know before that these weeds were as common here as with us; and never before did the sight of them give me so much pleasure. It would have been pleasant anywhere to meet these familiar weeds so far from home; but the delight to-day was to think that He and his disciples were as much accustomed to them as ourselves, and that a walk in the early spring was, in the pure country, much the same thing to them as to us.

But we soon came upon traces which showed that the expanse of pure country here was small in those days, compared with what it is now. The towns must have been more thickly set here than in any country I ever was in. Patches and masses of ruins showed themselves on every hand, so near each other as to indicate that the land must have been peopled to a degree now nowhere known. The first ploughing we had seen for many weeks was a striking sight to us; a mere scratching of the soil at the foot of the hills; but close by lay a heap of building stones, the remains



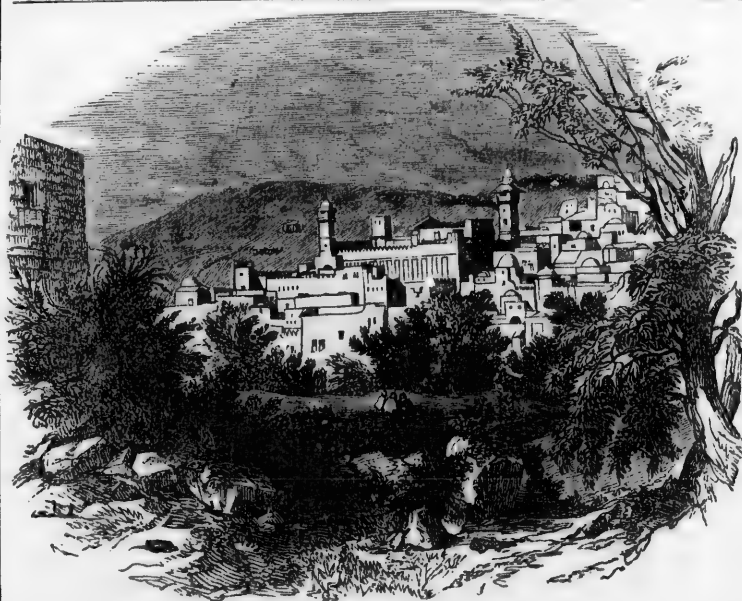


An Encampment.

of a town or village. Presently we saw a rude plough, with a single camel at work; and at hand was a long foundation wall, laid in a far-distant century. On a height further on, were the remains of a large ancient building, with two broken pillars standing, marking the site of the Aroer of Scripture. Then, though there were water-courses about every hill, wells began to abound; substantial, deep wells, built with a rim with holes in it, to receive the covering stone; such wells as tell of a settlement beside them. We stopped early this day—partly because it was Sunday, and partly because our Arab guards, who know nothing of our Sunday, found a convenient place among the hills, somewhat sheltered from the cold wind; and here, a very few miles from the boundary, the gentlemen of the party discovered that we had sat down in the midst of what was once a large town, though the place appeared a mere stony tract, like many that we had passed. In the morning early, I went out to see for myself, and was astonished at the extent of the ruins which I should not have observed while merely riding by. I could trace the lines of foundation walls for half a mile; and building stones, overgrown with grass, lay in hillocks for a considerable distance round. The many caverns in the limestone rocks, now used as beds for the goats, were found to be the vaults of large buildings now gone to ruin. In a few minutes, we traced three temples, or

other such buildings, by their overthrown pillars. Our eyes being now opened, we this day saw more and more remains, till we were convinced that all the way from the boundary to Hebron, the land was thick-set with towns, and swarming with inhabitants in the days of its glory—the days when the Teacher went up and down in it, meditating the changes which must make it what I have seen it now. Its hills and streams, its skies and flowers, are to-day what they were before his eyes: but where he saw towns on every height, and villages in every nook, there is now hardly left one stone upon another. A group of black Bedouin tents on a hillside, a camel or two browsing here, and a flock of goats there, are all that relieve the utter solitude where there was then an innumerable throng of men.

As we advanced, on the Monday, the soil became richer, and field was joined to field, so that we began to look for the landmarks which are here used instead of fences, to bound field property. We entered upon thickets and shrubberies, where white roses, the cyclamen, convolvulus, and fragrant herbs, abounded. Soon after noon, a new scene opened upon us. On our left hand lay a wide, deep basin among the hills, full of vineyards and olive-grounds, where the stones from the soil were built up into fences, and in almost every plot rose a garden-house. This was a sure sign that we were near a town; and as we rounded the hill on our right, we came in sight of the two emi-



Hebron.

nences on which Hebron is built. There stood the town where John the Baptist was born; and here were the scenes which he must many a time have talked of with his cousin, in their boyish meetings at Jerusalem for the feasts. Hebron, too, is only twenty miles from Bethlehem; only twenty-six from Jerusalem; and in those days, when a large amount of yearly travelling was a solemn religious duty incumbent upon every family, it is scarcely possible but that relatives must have often visited each other, and that Jesus and his parents must have come to Hebron.

The cave of Machpelah is there; and the burial-place of Abraham and his family was a sacred locality, and an object of pilgrimage to Jews of all ages. As we inquired for it, and walked round the enclosure, which the Mohammedans now permit no Christian to enter, I could not but think who might have been before us in the same quest.

As I sat on a tomb in the Turkish cemetery the next morning, watching the preparations for our departure, I almost dreaded the interest which every day would now bring, after the calm and quiet weeks we had spent in the desert. Our encampment looked much the same as it had done every morning for a month past; the Arab servants busy in taking down

and packing the tents, and a noisy quarrel going on in the midst—(this morning about a pistol having been stolen from one of the tents:)—and the differences were only that there were spectators standing by, and that our camels had given place to horses and asses. But instead of the rocks and sands of the desert, Hebron was before my eyes, and the hills where Abraham spread his flocks, and the spot where he and his family lay buried. And before night, I should see the place where David was born, and lived his shepherd life, and where Jesus was born. We had only twenty miles to travel this day to Bethlehem, but it was quite enough, for we were eager about every old tree, and well, and hill-top. The shrubs grew finer, and the wild flowers more abundant, the whole way; though the hills of Judah were wild and stony in parts, and no longer fit for pasturing such flocks as covered them when Abraham lived among them, or when the Hebrews drove in their cattle from the desert, or when David in his boyhood amused himself with slinging smooth stones from the brook while his father's sheep were feeding on the slopes. We sat down to rest and eat under the shade of a rock and a spreading tree; and for the hundredth time since we left Egypt it occurred to me how lit-



Bethlehem.

tle we can enter into the meaning of David when, in his divine songs, he speaks of the shade of rocks, and of the beauty of "a tree planted by rivers of water," and all such cool images. When one has been slowly pacing on, hour after hour, over glaring sands or heated rocks, under a sun which makes every bit of leather or metal, and even one's outer clothing, feel scorching hot, and oppressing one's very breathing, the sight of a patch of dark shade is welcome beyond belief: and when one has dismounted and felt the coolness of the rocky wall and of the ground beneath it, and gathered the fresh weeds which cluster in its crevices, phrase after phrase of the Psalms and prophecies comes over one's mind, with a life and freshness as sweet as the blossoms in one's lap.

Our first sight of Bethlehem was beautiful. We came upon it suddenly, just when the yellow sunset light was richest. Bethlehem was on the rising ground on our right, massive-looking (as all the villages of Palestine are) and shadowy, as the last sun-rays passed over it to gild the western hills, and another village which there lay high up, embosomed in fig and olive orchards. The valley between, out of which we were rising, lay in shadow. Before us, perched on a lofty ridge, which rose between us and Jerusalem, was the convent of St. Elias, which we were to pass to-morrow. I was sorry to turn away from this view: but we had to take the right-hand road, and ride

through the narrow streets of the village to the great convent, built over the spot where Jesus is believed by the monks to have been born.

It was too late this evening to see any of the sacred localities; but it was quite enough to have the moonlight streaming in during the whole night through the window of my lofty convent chamber, and to think that on this hill took place the greatest event in the history of the world; and that in the fields near, the gentle Ruth went about her gleaning, little dreaming in those days of her poverty, that from her meeting with Boaz among the reapers of his harvests, would arise such events to the human race; that the shepherd grandchild, whose divine songs were to soothe her old age, should be the mighty king he was, and the father of a yet mightier, who should build the great temple of the Lord; and that a more distant descendant should make these glories appear as childish toys in the presence of his greater sovereignty over the universal human soul. A wise man of a late century has nobly said that "Prosperity is the promise of the Old Testament, and Adversity that of the New." On this hill was born the prosperity of the old dispensation; and on this hill was born the Man of sorrows who knew the secret of true peace, and taught it in the saying that it profits not a man to gain the whole world if he lose his own soul.

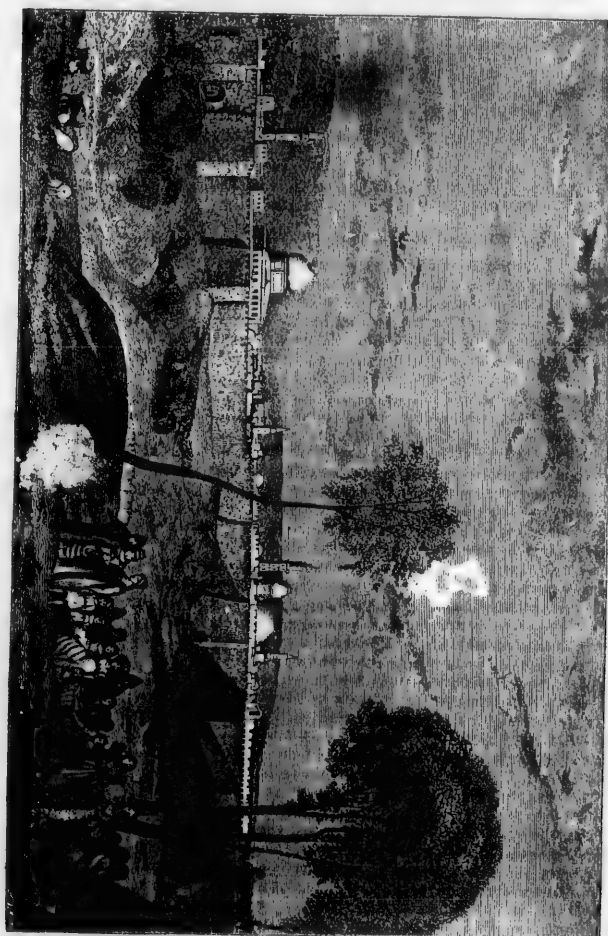
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Jerusalem, with its Wall—A northwest View.





Convent erected on what tradition affirms to be the Cave of the Nativity.

the convent. I cared little for the upper part, with its chapels for Greek, Latin, and Armenian worship; and not much more for the caverns underground, where the monks believe that Joseph and Mary remained while there was no room for them in the inn. If the town was too full to receive them while the people were collected for the census, it is hardly probable that they would repair to an underground cave; but in this cave mass was going on this morning; and striking was the effect, after coming down from the sunshine, of the crowded cavern, with its yellow lights and their smoke, and the echoes of the chanting. We returned when the service was over, and saw the star in the marble floor which marks, as the friars believe, the precise spot where Jesus was born, and the marble slab which is laid in the place of the manger. When I saw, throughout the country, how the Arabs now use the caves of the hills to bed their goats and cattle, this belief of the friars appeared less absurd than it would with us; but still, it is so improbable that the precise spot of these transactions (whose importance was not known till afterward) should have been marked and remembered, that I felt little interested in them in comparison with the landscape outside, about whose leading features there could be no mistake.

From the bottom of the garden, we overlooked the great valley which expanded to the northeast; and one enclosure there—a green spot now occupied by olive-trees—was pointed out to us as the field where the shepherds were abiding on the night when Christ was born. Behind it, to the east, lay range behind range of hills, stretching off to the north; and among these, we knew, lay the Dead Sea, and the Jordan, where it pours its waters into that lifeless and melancholy lake. As we left the convent and village, and descended the rocky road, with terraced vineyards and olive

groves on either hand, we knew that Joseph and Mary must have come by this way from Jerusalem when summoned to the census; and this was more to us than all the sights the friars had shown us in their zeal and kindness. We looked in at the tomb of Rachel, and at



Tomb of Rachel.

the convent of Elias; but our eyes and thoughts were bent toward Jerusalem. I remember, however, that here I first saw the waters of the Dead Sea, lying blue in a little gap between the hills.

As soon as I had mounted my ass before the convent of Elias I saw from our ridge some buildings on the rising ground which now showed itself before us. I was not immediately certain what they were: but the news soon spread among us. That rising ground was Zion, and those buildings belonged to Jerusalem, though they stood outside the wall

Immediately after, the walled city itself came into view, lying along the hills. Most of the party were disappointed. I was not—partly because I knew that we were approaching it from the least favorable side, and partly because my expectations had much underrated the size and grandeur of the city. What we now saw was a line of white walls on a hill-side, with some square buildings and small white domes rising within.

I walked the rest of the way. On our right were hills, the summit of one of which was Acceldema, bought by the priests with the money which the wretched Judas returned to them when he found too late what he had done in his attempt to force his Lord to assert his claim to a temporal sovereignty. On our right was the plain of Rephaim. When we arrived at the brow of the high ground we were on, we were taken by surprise by the grandeur of the scene. Zion now appeared worthy of her name, and of her place in the hymns of David, and in history. We were now overlooking the valley of Gihon, more commonly known by the name of Hinnom. From its depth, and its precipitous rocks on our side, I should call it a ravine. This deep dell contains the Lower Pool, now dry; and the aqueduct from Solomon's Pools is seen crossing it obliquely. Its opposite side is Zion, rising very steeply, still terraced for tillage in some parts, and crowned by the city wall. To the right, sweeping away from the ravine of Gihon, is the deep and grand valley of Jehoshaphat, clustered with rocks, relieved by trees, and leading the eye round to the slope of Olivet, which, however, is best seen from the other side of the city. The black dome of the tomb of David was the next object; and after that, the most conspicuous roof in the city—the great dome of the Mosque of Omar, which occupies the site of Solomon's Temple.

By this time, there was silence among us. I walked behind our cavalcade, as it slowly ascended the beautiful rocky way—glad of the silence permitted by each to all; for it was not possible at the moment—nor will it ever be possible—to speak of the impressions of that hour. We entered by the Jaffa gate; and every echo of our horses' feet in the narrow, stony, picturesque streets, told upon our hearts as we said to ourselves that we were taking up our rest in Jerusalem.

THE liberty of a people consists in being governed by laws which they have made themselves, under whatsoever form it be of government; the liberty of a private man in being master of his own time and actions, as far as may consist with the laws of God and of his country.

PLAN FOR EMANCIPATION.

THERE has been so much said and published on the subject of Emancipation, both at the north and south, that it has become somewhat difficult to discuss it without awaking party interests and feelings. The best cause, as is well known, may be ruined by injudicious advocates. The people of the south, however, can not but approve of candor and truth; and we feel confident that they will be pleased with the Hon. DAVID SEARS' safe and liberal propositions on the subject of gradual emancipation, advocating, as they most clearly do, not only a full indemnity for every slave liberated, but presenting no impossibility or serious difficulty of execution.

Before presenting our readers with the substance of Mr. SEARS' Plan for Emancipation, we insert the following petition in its support, which, we understand, is now in circulation for signatures in this and several other of the states:—

"To the Senate and House of Representatives of the United States of America:—
The petition of the undersigned, citizens of ———, respectfully asks, that you will consider the expediency of endeavoring to effect such a change in the constitution or laws, as shall appropriate the public lands of the nation in aid of the extinction of slavery throughout the Union.

"Also, the expediency of appointing commissioners, whose duty it shall be—under such conditions as congress may determine—to purchase and emancipate slaves—being female children born prior to 1850. And, also, of making annual appropriations by law for the purpose, on a pledge of said public lands, with a declaratory act, that from and after 1850, there shall be no hereditary slavery. But that on and after that date, every child born within the United States of America, their jurisdiction and territories, shall be born free."

In one of Mr. SEARS' late communications on the subject of Emancipation, when giving statistical facts in relation to it, he says:—

"The last census of the United States gave 420,000 as the number of female slaves under ten years of age, and 390,000 as the number of female slaves between the ages of ten and twenty years. The plan proposed contemplates the purchase of one, or both of these classes, at a price to be agreed on. It is estimated that at their present average value, they could be bought and emancipated at a cost much less than the expense of the last war of the nation with Great Britain, and for less than the probable cost of the present war on Mexico."

In relation to the commissioners to be ap-

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A summary of the plan is as follows:—

1. Congress to appropriate the proceeds of the sales of public lands to the extinction of slavery.

2. Commissioners to be appointed by Congress to negotiate with the legislatures of the slave states, for the purchase of female slaves under ten years of age, and also, if necessary, female slaves under twenty years of age, and with instructions to close a contract with any one of said states which may agree to accept the terms of their commission. The money to be paid to the states, and to be by them apportioned.

3. Female slaves so purchased are to be free, and their issue are to be free.

4. In consideration of the above, all children born after 1850, are to be free, within the states so contracting, and from that date, hereditary slavery in the United States, its territories and dependencies, is to cease.

In a reply of Mr. SEARS to a committee of citizens of Philadelphia, on the subject, are the following practical remarks, which seem to rid the plan of the only serious objection which can be urged against it:—

"I am ready to acknowledge a right of property in slaves—living, tangible, and existent—but not a right to hold the race in bondage through all future time. And in order to avoid the difficulties and dangers which might arise from an immediate and unqualified liberation of a debased and ignorant class, I have suggested that children who may be born after 1850, should be apprenticed to their owners, or others, until they are twenty-one years of age, on the proviso that they receive from their masters a suitable education to fit them for their improved condition. And this is to apply to all children born after that period, whether their mothers have been freed by appropriations made by Congress or not. The process once begun, and the impediment to our being a powerful, a united, and a happy people, is for ever removed."

The spirit of Mr. SEARS' plan of emancipation is contained in the above summary. In our own judgment, we have arrived at a conjuncture in which the wisdom of our greatest statesmen is required on this subject. The present scheme transfers the burden from the slaveholder to the nation. Thousands at the north will be found to aid in the accomplishment of a peaceful emancipation, even to the extreme of self-denial and sacrifice. Mr. S.'s plan has not been prepared under the influence of any sectional or party feeling. The warmest advocates of the present state of things must be satisfied of this after reading his excellent and judicious letters on the subject, as they show, most conclusively, that the evil can be gradually abolished, without detriment to their

rights or interests. We invite the attention of the press and our public men to the consideration of the plan proposed. May nothing cloud the prospect of the nation's coming to a speedy, united, and happy decision.

A late number of the "Norfolk (Va.) Herald" contains the following remarks of its candid and truth-speaking editor:—

"Let those who are lured by the prospect of gain, or who really believe that they can better their condition by emigrating to the new states, follow their bent—and take their slaves along with them. The vacuum may cause a momentary weakness, but it will be only to recruit with twofold vigor. The place of every slave will in time be filled with hardy, industrious, tax-paying, musket-bearing freemen, of the right stuff to people a free state, which Virginia is destined to be one of these days, and the sooner (consistently with reason) the better for her own good."

This is cheering intelligence from such a quarter. The people of western Virginia—whose prolific mountains and valleys encourage the growth of the spirit of freedom—have long wished to be rid of slavery. But the people of southern Virginia, more unfortunate in location and association, have hitherto successfully repressed this western sentiment. If, as would appear from this paragraph from the "Norfolk Herald," the true character of slavery, as a ruinous absorbent, is beginning to be felt, there is indeed hope of Virginia.

That it would be "better for her" if slavery were abolished in Virginia, there can be no reasonable doubt. Slavery is, and always has been, an incubus upon the prosperity of that state. Her originally rich soil has become barren and fruitless under the exhausting and improvident tillage of slave-labor. The once-prolific plantations are bankrupting their proprietors. To thousands, the unpleasant alternative is presented of abject poverty at home, or emigration to the new soil at the west. Large numbers have chosen the latter; and their places have been filled by farmers from the north. They, schooled in the science of agriculture, and inured to toil, can, with free labor, restore what slavery has exhausted. Under their judicious application of this free labor, Virginia would soon be lifted from her present condition; and when this truth shall be felt and acted upon, the "Herald's" prediction will become matter of history.

With these and a multitude of similar facts before them, will not the intelligent and reflecting people of the slaveholding states take into serious and candid consideration the plan devised and recommended by Mr. SEARS for the removal of the originating and operative causes which, as long as they continue to exist, can not, according to the apprehensions of

We invite the attention of public men to the consideration of the proposed. May nothing of the nation's coming to a happy decision.

The "Norfolk (Va.) Herald" remarks of its managing editor:—

"We are lured by the prospect of believing that they can by emigrating to the new continent—and take their slaves with them—vacuum may cause a stir, but it will be only to the rigor. The place of evildoers will be filled with hardy, strong, musket-bearing freemen to people a free state, destined to be one of these (consistently with reason and good.)"

"Intelligence from such a source of western Virginia—its plains and valleys encourage a spirit of freedom—have rid of slavery. But the Virginia, more unfortunate than this, have hitherto such a western sentiment. From this paragraph from the 'Herald,' the true character of the absorbent, is beginning to be seen. The hope of Virginia."

"Better for her" if slave-States, there can be no slavery is, and always has been on the prosperity of that rich soil has become exhausted under the exhausting and slave-labor. The once-bankrupting their pro-slavery, the unpleasant alternative of poverty at home, or new soil at the west, chosen the latter; and when filled by farmers from the school in the science of toil, can, with free slavery has exhausted. The application of this free and soon be lifted from her and when this truth shall come, the "Herald's" premature of history.

"A multitude of similar facts at the intelligent and reasonable slaveholding states take did consideration the plan proposed by Mr. SEARS for originating and operative as they continue to exist to the apprehensions of

the wisest men who have lived in the southern states, fail of being deeply injurious to their present prosperity and happiness, and of being instrumental in placing invincible impediments in the way of their future advancement in science, literature, the arts, in wealth, and in everything else which can justly be deemed promotive of an increased degree of safety, comfort, civilization and refinement!

We more cheerfully make these reflections, from the well-known fact that such illustrious men as RUFUS KING, while United States senator, and more recently the distinguished HENRY CLAY, have boldly and honestly expressed similar sentiments.

The terms proposed are liberal. Mr. S. remarks: "We would manage it, if possible, so as to gain the approbation of the most interested, and be prepared to meet them on terms of mutual concession for common preservation. COMPENSATION MUST BE MADE FOR EVERY EMANCIPATED SLAVE, and an obnoxious feature in the constitution removed." Now, if our southern friends would meet the demands of this proposal fairly, manfully, in due season, and in as kind a spirit as animates the author of the plan alluded to, the one great trust devolving on the men of the present generation in this country would be accomplished; and, in ages to come, their posterity would bless them.

In order to present more clearly, the views and sentiments of Mr. SEARS, in relation to his proposed plan for emancipation, we give the following extracts from his correspondence on the subject, with the late Ex-President, JOHN QUINCY ADAMS:—

"We believe that the interest as well as happiness of the whole Union, requires the abolition of slavery. But in this belief we would be careful to let neither prejudice, nor passion, nor wrong, govern us. We desire, therefore, that some proposal may be made to show to the intelligent and thinking part of the south, that in the adjustment of this matter, the rights of property are to be sacredly respected; some mode adopted to satisfy them that our intentions are honest:—some evidence given, that we act under a conscientious conviction, that on it depends the quiet and duration of the Union."

"To avoid the inevitable result of an open outbreak, it is necessary that there should be a united action in the free states, with the adoption of some great principle which shall unite us all."

"In this view, the enclosed principles are framed. They are independent of party, and leave every one free to act on all minor questions—being united only in this—that from and after 1850, every child born in the Uni-

ted States shall be born free. This great object we earnestly seek to obtain in a reasonable way, and upon principles of right and justice. We would manage it, if possible, so as to gain the approbation of those most interested, and be prepared to meet them on terms of mutual concession for common preservation. Compensation must be made for every emancipated slave, and an obnoxious feature in the constitution removed. But it is not necessary in attempting this, to touch the argument that a certain interpretation of that instrument would perpetuate slavery to all generations unborn, nor to show that by such an assumption of construction, the state of Virginia, and her southern neighbors—while the traffic is expressly forbidden elsewhere—are virtually made another Africa for the supply of slaves, and have a monopoly of the trade. Such irritating topics may be put at rest. It is best to appeal to the interest of the slaveholder to convince him. It is proposed that he should be paid for every slave that is emancipated, and that he shall have the labor, during their lives, of such as are not purchased. He is in fact deprived of nothing which has existence, or in which he can have property. No pecuniary sacrifice is exacted—the expense of the infancy of children being paid by indenture with their mothers, who, being purchased and made free, may bind them to labor, as we bind our apprentices—and an honorable opportunity is thus offered to the slaveholder, to test the honesty of his democratic principles, and his regard for human rights, without danger, and without loss. The moral tone of the slave is raised by the brighter future, and parent slaves are induced to behave well, and to work hard, in the knowledge that their children will be free; all tending to the benefit of the owner."

"No proposition like the present has ever yet been made to the south, nor remuneration in any shape offered. Let us try it, in the spirit of conciliation, to save them and ourselves from a great, a common, and an impending calamity."

"These views I have strongly urged, and I have endeavored to impress on the minds of our friends the necessity of uniting on the subject of compensation, for the sake of union, happiness, and peace."

"It certainly appears to be a matter of great importance, especially to the three states Maryland, Virginia, and Kentucky, to look closely into the subject, and examine the proposition tendered to them. They are border states, and in contact with a spirit of freedom; and while they are becoming comparatively less rich and strong, they can not but see that their neighbors—divided from them,

only by an imaginary line, or a small stream—are rapidly advancing upon them in wealth and strength. Nor can they deny that these consequences follow, on the one hand, from the institution of slavery, and on the other, from the institution of free labor.* The former must ever yield to the latter in the production of wealth, prosperity, and power. As these elements of greatness increase among the free states, what, in all probability will be the future destiny of these border states?"

"I wish not to excite an angry feeling, or to wound the self-love of any one, *my object is peace*; but if the people of these states, would calmly hear what may be said, and coolly judge of what they hear, we should all, in time, come to the same conclusion. Suppose this conclusion arrived at, then Maryland, Virginia, and Kentucky, would unite in applying to Congress for the very compromise which the petition offers. They would say, 'We have long borne the burden of slavery, and now wish to get rid of it. We cannot do so without your assistance. We may, it is true, sell a part of our property in South Carolina and other states, where the soil, from its nature, and the climate, from its unhealthiness, can only be inhabited by the African, but we have been at a great expense in rearing the infant to the child, and in feeding the old man in his age. You must, therefore, grant us something as an equivalent, and we will meet in the spirit of compromise, to root from our land an acknowledged evil. Put us, we pray you, in a position to reap the full advantages offered to us by Heaven, in a

* What a volume is contained in the following contrast; and yet this is only a fair statement of the difference between a slave and a free state.

FREE SOIL—MASSACHUSETTS	SLAVE SOIL—S TH CAROLINA
Has territory...7,500 sq. m.	Has territory...25,000 sq. m.
Pop. in 1845.....600,000	Pop. in 1845.....600,000
Products in do. \$124,735,364	Products in do. \$53,086,765
Production to each individual.....\$154	Production to each individual.....\$88
Cost of State Government, 1844...\$461,097	Cost of State Government, 1844...\$347,831
Members of Congress.....10	Members of Congress.....7
Scholars in Common Schools.....160,257	Scholars in Common Schools.....12,530
In Academies.....16,746	In Academies.....4,328
In Colleges.....769	In Colleges.....168
Persons over 20 who can not read or write. 4448	Whites over 20, who can not read or write...30,015
Slaves.....NONE	Slaves not permitted to read or write...330,000

Still more striking does this contrast become if we compare Kentucky and Ohio—sister states, alike in soil and climate, and divided only by a river, but as dissimilar in enterprise and prosperity as can be imagined. No powers of argument can reason down facts like these, and already is their influence at work in Virginia, Kentucky, Maryland, and perhaps other states. Conciliation, as well as firmness, is now demanded on the part of the north; firmness in an opposition to the extension of slavery, but a generous and conciliatory spirit in devising a method of relief for the states now involved in it.

healthy climate and a rich soil, and to this end purchase and make free the female infants of our slaves, and we will *abolish hereditary slavery for ever*. Every child born after 1850, shall be born free."

"Nor is the supposition of such a union of opinion by any means chimerical. It is obviously for the interest of these three states to range themselves on the side of freedom, and if they should do so, the result is certain."

"As events ripen, it is evident that no time should be lost in devising some conciliatory measure of compromise. The great question of slavery, though in a modified form, has already been brought before Congress, never again to quit it until slavery ceases. The power and number of those who seek its extinction are daily on the increase, and the chances of compensation for slaves will yearly grow less: after 1850, in my opinion none can be obtained. The matter must then assume a more serious aspect, and the border states will doubly suffer."

"In a letter to a friend—who, in a series of numbers recently published in the Boston Courier, has so fully demonstrated the value of the plan of emancipation I suggested, and who has touched the subject with a master's hand—I frankly stated my fears, and in giving them also to you, I trust they will be received as they were uttered—'more in sorrow than in anger.'"

"It seems to me that we are slowly but steadily advancing to that dreadful crisis that has been so long predicted. The events of the next ten years will probably decide the question of the continuance of South Carolina, and some other of the slave states as a part of the confederacy—for by that time the north will demonstrate a determined force against slave dictation. The balance of power under the compromise of the constitution is gone—the constitution itself is invaded and broken—and new elements are introduced into it, which are too inflammable in their nature not to consume it."

"The right of slave representation, originally limited, in fact if not by name, to five out of thirteen states, is soon to be extended over conquered territories and foreign nations of more than half a continent. The indolent and ignorant slaveman, without education or industry, is hereafter, by means of a three-fifth vote, to guide the destinies of this mighty empire."

"Had a firm resistance been shown to the admission of Texas, while demanding a *slave representation*—I do not say a *slave population*; that is another branch of the question, but a *slave representation*—there is little doubt that the war with Mexico would have been avoided. What is now to prevent a

slave representation from being indefinitely extended? What to prevent the farmer and mechanic of the north, from being ruled and governed by the slaves of the south? Nothing but a stern and unbending will, followed out by action, to maintain the principles of the constitution. Mutual concession and compromise may do much, but can they be brought to bear, except under pressure of necessity, and to save the Union."

"Events are tending to this issue, and sooner or later the struggle will come. It is impossible that three fourths of the talent, the wealth, and the industry of the country can always quietly submit to have their petitions and counsels rejected, and their best interests, and their own peculiar institutions, continually sacrificed at the will and pleasure of the feudal bondage power of slavemen. We had better meet the evil, however great, or in whatever form it may approach us."

"I do not fear a dissolution of the Union. The worst that can happen is a temporary secession from the confederation of certain of the slave states, which may perhaps quit us for a time, and attempt to form an independent government! Let them try the experiment. In five years from their separation, they would be completely at our mercy, and petition for re-annexation on our own terms. They can not exist without us—yet being with us, and of little comparative value in the statistics of power and the elements of greatness, they govern us at their own caprice."

"We are, in fact, in a false position. We have yielded up the compromise of five slave states to eight free states—the spirit of the compact of the constitution—and permitted a gross encroachment of the slavemen upon the degree of power we originally conceded. But notwithstanding these facts, and the feelings they naturally engender, I am anxious still to offer to them the plan for emancipation which you have been kind enough publicly to notice. It was conceived in good will and friendship to the south, and offered in the spirit of mutual concession to avert an impending evil, and restore harmony to the Union."

"No one understands better than yourself—whose experience extends beyond the era of the constitution—that the present state of hostility between the north and south, has mainly been brought about by a British policy, and the radical sentiments uttered by the feudal chiefs of South Carolina, and other slave states, and thrown by them as firebrands among us, to light the flames of riot, and spread abroad the embers of disunion. They have been successful, and we have retreated before them."

"Their huzzas for liberty to all, and equality for each, have been taken by us literally, and we hasten to shout them back in earnest. Men north of Washington, can not comprehend why the doctrine should not be good south of it, and what the slaveman has preached the freeman is now determined to practise."

"Had the educated and intelligent of the south, instead of rushing to their ruin in a vain struggle for personal power, been willing to have remained friends with the same class of the north, and jointly labored with them in the construction and maintenance of a government of laws founded upon reasonable and liberal principles, and unitedly opposed the intrigues and management of vicious and needy men, who have nothing to lose and everything to gain, how much more happy would have been our country, and how many bitter feelings would have been spared to her best and bravest."

"Quem Deus vult perdere, prius dementat."

THE AGE OF PROGRESS.

No man, we think, will deny that the state of society, which belongs to the present era, is distinguished above all others, by the desire and the power to advance. To resist such progress, is not possible; and, if possible, would not be lawful; since the resistance would be nothing less than the wilful rejection of benefits which God's providence has scattered in our path. Look only to those benefits which the oldest may remember to have seen wrought in his own day; and the commencement of some of which may have been witnessed, even by the youngest. Look, for instance, to the valuable discoveries made, we may almost say daily, throughout the vast and various fields of natural science. Look to the new powers with which the telescope and microscope are invested, and which enables us—in a way more wonderful than any which man's imagination could ever have conceived possible—"to see a system in every star, a world in every atom." Look also to the spark of the electric telegraph, darting with lightning speed through hundreds of miles of space, and, as it darts, communicating thought from man to man. Behold the effects which have been produced by the single agency of steam, and see what centuries of improvement, in comparison with the past, the last half century has comprised within itself. But why need we go through the long catalogue of wonders? If these be among the marvels of the present day, is there any human being who can say that his own position

in the world is not affected by them? Not now to enumerate all the changes which must arise, we would ask him whether there be not a positive addition made hereby to the period of his own existence? We mean not, of course, an addition to the days, and weeks, and months, and years, by which the course of life is reckoned, but an addition to all the "appliances and means" of usefulness which may, and ought to, be exerted within those limits. Life is virtually prolonged, wheresoever the facilities of sight, and motion, and thought, and knowledge, and action, are multiplied. And, if it be so, then is a greater responsibility attached to that stewardship which God has committed to the charge of all of us. A higher value is imparted to the trust; and heavier will be the sin of throwing it away, or of employing it unprofitably.

"The steam-engine and the railroad," says Sir Robert Peel, "are not merely facilitating the transport of merchandise, they are not merely shortening the duration of journeys, for administering to the supply of physical wants. They are speeding the intercourse between mind and mind—they are creating new demands for knowledge—they are fertilizing the intellectual as well as the material waste—they are removing the impediments which obscurity, remoteness or poverty, may have heretofore opposed to the energy of real merit."

These are "words of truth and soberness," they describe accurately the benefits which result from the agency of this mighty instrument; and the years which have elapsed since they were spoken, have but supplied fresh and diverse testimony in support of the same truth. What then is the duty of wise men, who find themselves placed in the midst of changes so numerous and so vast? Should not their prayer be to gain for all classes the utmost amount of benefit thus placed within their reach; and should not their efforts be directed to the accomplishment of their prayer? To this great end, let them—to borrow the forcible language of Dugald Stewart—"heave the log into the deep—and measure the rapidity of the current by which the world is borne along." They can not, I repeat it, stop the progress of the current if they would; and they ought not, if they could. Neither may they stand idly by, trusting to the strength of the moorings to which their vessel is made fast; for the stoutest cable may give way, and the fairest vessel may drift and be lost amid rocks and shallows. Let them strive, therefore, and turn, in the best directions, the stream which is carrying them forward. Let them open for it a free course into regions where it is most needed; and rejoice, as they see it "fertilizing the intellectual as well as the material waste."

BOSTON COMMON.

This beautiful piece of ground, associated with so many of the pleasures and so much of the historical pride of the inhabitants of Boston, is situated in the westerly part of the city, in front of the statehouse. It is surrounded upon three sides by streets, upon which are some of the handsomest private residences in the city, and upon the other, it lies open to the country, commanding a beautiful view of the hills and villages of Roxbury, Brookline, Brighton, and Cambridge.

The space contained in the common proper—which expression we suppose to be no solecism, except in speaking on grammatical subjects—is about forty-eight acres, inclusive of the cemetery within its limits, which is now tastefully laid out with trees and walks. The land west of Charles street, and held by the city as a part of the same property, as joint-stock of the citizens, is now used for a public garden and is rapidly becoming an ornament and a benefit to Boston. The common, including this piece of land, consists of about seventy-five acres, and to the traveller entering the city from the west, forms a very extensive opening among the otherwise compact masses of brick upon the peninsula.

The malls about the common are shaded by the most beautiful elms; and trees, mostly American elms, old denizens of colonial times and young children of city parentage, stand in numbers (to speak statistically there are over seven hundred) in every part of the common. Near its centre is a little sheet of fresh water, now the basin of a beautiful Cochituate fountain, which modern refinement once christened "Crescent Pond," and once "Quincy Lake," but which Bostonians will probably ever speak of, since all men are boys once, as the "FROG POND." About this pond have been set some young and thrifty elms, which we hope to see yet rivaling in beauty their older brothers in the malls. South of the pond stands the most prominent of the eminences with which the surface of the common is varied, which until within a few years has borne the marks of a fortification thrown up by the British troops quartered here in 1775, and although its surface is now more smooth and rounded, many Boston boys will regret the destruction of "the fort."

The common has never been as has been supposed by some, held as the property of an individual or individuals. It appears, from a deposition of several of the then "oldest inhabitants," taken before Governor Bradstreet in 1684, for the purpose of discovering the true terms and agreement by which the peninsula was obtained by the colony under Winthrop, that after the land (with a reservation of about

COMMON.

of ground, associated pleasures and so much of the inhabitants of the westerly part of the house. It is surrounded by streets, upon which the most private residences the other, it lies open ending a beautiful view of Roxbury, Brook-bridge.

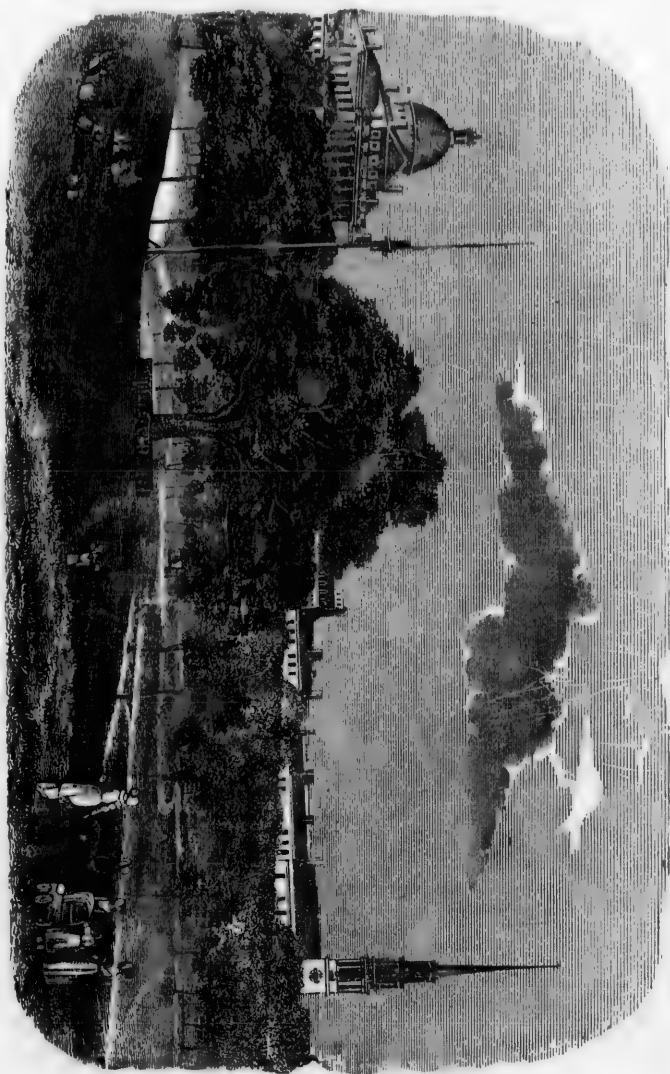
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common are shaded by ns; and trees, mostly izens of colonial times city parentage, stand in istically there are over y part of the common. le sheet of fresh water, utiful Cochituate fount- nement once christened once "Quincy Lake," ill probably ever speak ys once, as the "Frog nd have been set some , which we hope to see their older brothers in e pond stands the most ences with which the is varied, which until s borne the marks of a by the British troops , and although its sur- th and rounded, many the destruction of "the

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The Boston Common, with the Statehouse in the distance.



six acres) had been sold to them by "Mr. William Blackstone," for a considerable sum of money made up by a subscription of six shillings from each householder ("none," says the affidavit, "paying less, some considerably more"), "the town laid out a place for a training-field, which ever since, and now is used for that purpose and for the feeding of cattle." This was the origin of the common, which we first find alluded to in the town records, under date of October 10, 1634, when certain commissioners appointed to divide and dispose of the unoccupied lands are instructed to leave out "such portions in common for the use of New-comers, and the further benefit of the town, as in their best discretions they shall think fit."

Some further extracts from the town records on this subject may be found interesting. In May, 1729, we find an admirable instance of the "when-it-rains-let-it-rain"-philosophy, an attempt having been made to do something with the marsh on the west side of the common. "The selectmen having viewed the marsh at the bottom of the common, and not finding any material use that can be made of it," &c., "are of opinion that it is best to lye in the condition it now is." This condition seems to have been, for a piece of land, about as precarious as that of some modern western cities, for we find an account about that time (January, 1728) of two young men, skating "at the bottom of the common," who were drowned there from the breaking of the ice.

In March, 1733, it was "voted that the row of trees already planted on the common be taken care of by the selectmen, and that another row of trees be planted there at a suitable distance;" and "that a row of posts, with a rail on the top of them, be set up and continued through the common, from the burying-place to Colonel Fitch's fence, leaving openings at the several streets and lanes." In 1739, it was "voted that posts and rails be set up from the granary in Common street" (the site of the present Park-street church) "to Beacon street."

We find subsequently two propositions for disposing of parts of the common, one "to sell Fox hill on the common," a low, sandy mound, which has been levelled and used in filling up the above-mentioned marsh; and one a petition from a citizen for half an acre of land to be taken out of the common for a house-lot: but neither of them was acceded to.

The original purposes specified in the reservation of the common as a place for "a training-field, and the feeding of cattle," were long subserved by it. We hope that the planting of so many trees, which has rendered it unfit for the former purpose, will preserve it from that use in future, as it has done in a great

degree lately. Cattle have been kept there within the last fifteen or twenty years, and the city ordinance that forbids this bears date as late as 1833. Many Bostonians will recollect an anecdote in connexion with this case of the common, of an exercise of privilege which would hardly be tolerated at the present time—and some of the older portion of the community may not have forgotten the spirit with which a venerable lady, now deceased, used to relate how she was unexpectedly called upon to entertain, as the guests of her husband, whose mansion still overlooks the common, a large party of French officers belonging to the count d'Estaing's fleet, and how her energies arose with the emergencies of the occasion. "And what do you think," would she say, "I did for the cream and milk to serve for a breakfast for such a party? Why, I sent out my people with orders to milk all the cows on the common, and told them if anybody asked any questions, to tell them to take the bill to Governor Hancock."

The common is growing in beauty every day, and will ever be a source of pride and pleasure to Bostonians. It is a spot endeared to all the inhabitants of Boston, and a theme for those praises of strangers with which we all foster our love and our vanity of home. It will remain companion of Faneuil hall in the historical associations of the city, and will hardly need for its preservation the clause in the city charter which forbids the council to sell it.

VIEW OF NIAGARA FALLS,

BELOW TABLE ROCK.

Among the many points that arrest the attention of the traveller at Niagara, there is none which he beholds with greater awe, or which so fully reveals to him the vastness of the mighty cataract, as the one depicted in our engraving. The interest of the view is greatly heightened by the impending cliff, which has the appearance of being about to fall and crush all beneath it. A few years since, the most projecting part of it fell, and now a large and very deep crack has widened around the remaining area of the platform above; yet, notwithstanding its fearful appearance, ladies and gentlemen crowd its broad summit at all hours—walking, drawing, and gazing—in the fullest confidence that rocks have bases. And so it will go on, probably, till the "one (thunder) too many hammers" through its crack of doom!

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View of Niagara Falls below Table Rock.

The path leading behind the sheet of the "Horse-Shoe Fall," which is on the Canada side, runs close under the cliff of Table Rock; and, between the spray and the small rivulets that trickle over the sharp edge, or find their way out of the numerous crevices on the face of the precipice, it is as wet as the lawn blest with "perpetual rain" by the Witch of Atlas. A small shanty stands at the head of the staircase, where a reading-room and registry are kept, and curious walking-sticks, cut at Niagara, minerals, spars, and stuffed scorpions, vended; the proprietor also officiating as guide under the falls. Parties are formed daily to visit this part of the falls, and "go behind the sheet." The mode of procedure is so interesting, that we will give an account of a visit to it:—

The ladies were taken into a small apartment to change their dresses, preparatory to their descent; and the guide soon metamorphosed his cavaliers into as brigand-looking a set of tatterdemalions as could be found in the Abruzzi. Rough duck trousers, long jackets of green painted cloth, oil-skin hats, and flannel shirts—the whole turn-out very much like the clothes of the drowned, exhibited for recognition at the mosque in Paris—constituted our habiliments. The difference of the female costume consisted in the substitution of a coarse petticoat for the trousers, and a string tied over the broan-brimmed hat;—and thus arrayed, few would have known us or been willing to recognise us as their friends. The most ludicrous part of the expedition is passing in review before the curious persons collected on the way.

The guide went before, and we followed close under the cliff. A cold clammy wind blew strong in our faces from the moment we left the shelter of the staircase; and a few steps brought us into a pelting, fine rain, that penetrated every opening of our dresses, and made our foothold very slippery and difficult. We were not yet near the sheet of water we were to walk through; one of our party gave out and returned, declaring it was impossible to breathe; the rest, imitating the guide, bent nearly double to keep the beating spray from their nostrils, and pushed on, with enough to do to keep sight of his feet. We arrived near the difficult point of our progress; and in the midst of a confusion of blinding gusts, half deafened, and more than half drowned, the guide stopped to give us a little counsel how to proceed the remainder of the way. All that could be heard amid the thunder of the cataract beside us was an injunction to push on when it got to the worst, as it was shorter to get beyond the sheet than to go back; and, with this pleasant statement of our dilemma, we faced about with the longest breath we

could draw, and encountered the enemy. It may be supposed that every person who has been dragged through the column of water which obstructs the entrance to the cavern behind this cataract, has a very tolerable idea of the pains of drowning. What is wanting in the density of the element is more than made up by the force of the contending winds, which rush into the mouth, eyes, and nostrils, as if flying from a water-fiend. The "courage of worse behind" alone persuades the gasping sufferer to take one desperate step more.

It is difficult enough to breathe within; but with a little self-control and management, the nostrils may be guarded from the watery particles in the atmosphere, and then an impression is made upon the mind by the extraordinary pavilion above and around, which never loses its vividness. The natural bend of the falling cataract, and the backward shelf of the precipice, form an immense area like the interior of a tent, but so pervaded by discharges of mist and spray, that it is impossible to see far inward. Outward the light struggles brokenly through the crystal wall of the cataract; and when the sun shines directly on its face, it is a scene of unimaginable glory. The footing is rather unsteady, the path being only a narrow shelf composed of loose and slippery stones. A chain has been fastened to the rock part of the way, which somewhat aids the visitor in the most dangerous portion of the passage. The distance from where the falls commence to "Termination Rock" is two hundred and thirty feet. Beyond this point it is impossible for man to penetrate, as the ledge there rises perpendicularly from the water to the top of the falls. On the whole, the undertaking of a passage under the sheet is rather more pleasant to remember than to achieve.

The following lines, written a few years since by the late GRENVILLE MELLE, after going "within the veil" of Niagara, beautifully expresses the emotions produced in the minds of those who have witnessed the majestic scene:—

O God!—my prayer is to thee, amid sounds
That rock the world! I've seen thy majesty
Within the veil!—I've heard the anthem-shout
Of a great ocean, as it leaped in mist
About my thunder-shaken path!—thy voice
As centuries have heard it, in the rush
And roar of waters! I have bent my brow
Within thy rainbow—and have lifted up
My shriek 'mid these vast cadences!—I've seen
What is the wonder of ETERNITY—
And what this visioned—nothingness of man!

TABLE ROCK, August 22, 1838.

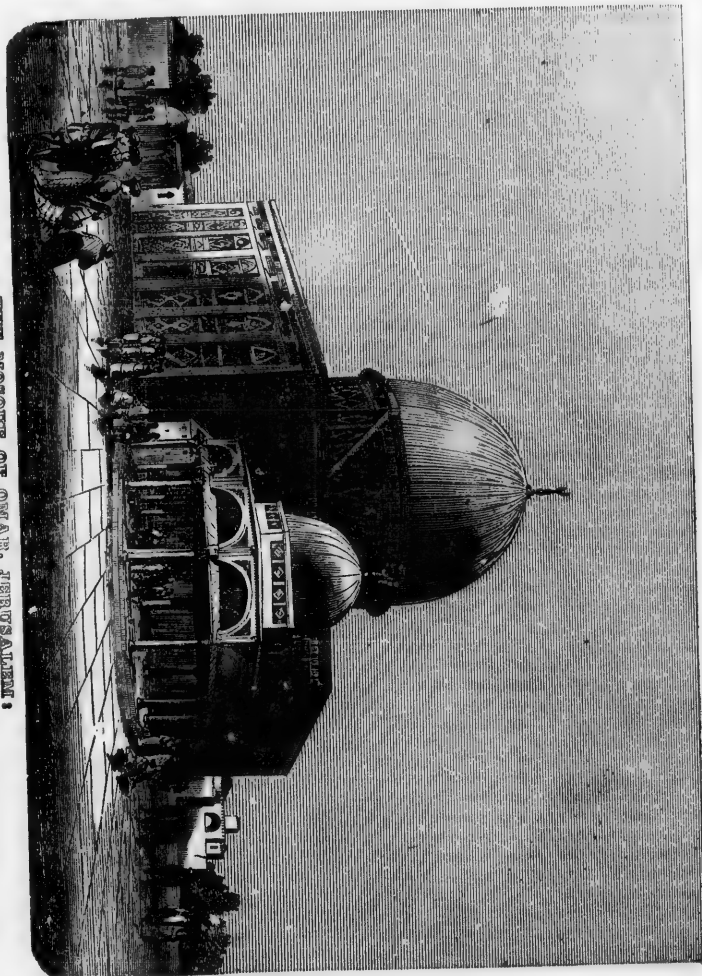
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THE MOSQUE OF OMA, JERUSALEM:
On Mount Moriah, where the Temple of Solomon stood.



TRAVELS IN THE HOLY LAND.—NO. 2.

BY HARRIET MARTINEAU.

My room opened upon a little terrace—the flat roof of a lower apartment in our inn at Jerusalem, and from this little terrace I was never tired of gazing. A considerable portion of the city was spread out below me; not with its streets laid open to view, as it would be in one of our cities; but presenting a collection of flat roofs, with small white cupolas rising from them, and the minarets of the mosques springing, tall and light as the poplar from the long grass of the meadow. The narrow, winding lanes, which are the streets of eastern cities, are scarcely traceable from a height: but there was one visible from our terrace—with its rough pavement of large stones, the high housewalls on each side, and the arch thrown over it, which is so familiar to all who have seen pictures of Jerusalem. This street is called the Via Dolorosa, the Mournful Way, from its being supposed to be the way by which Jesus went from the Judgment Hall to Calvary, bearing his cross. Many times in a day my eye followed the windings of this street, in which I rarely saw any one walking: and when it was lost among the buildings near the walls, I looked over to the hill which bounded our prospect;—and that hill was the Mount of Olives. It was then the time of full moon, and evening after evening I used to lean on the parapet of the terrace, watching for the coming up of the large yellow moon from behind the ridge of Olivet. By day the slopes of the Mount were green with the springing wheat, and dappled with the shade of the olive clumps. By night, those clumps and lines of trees were dark amidst the lights and shadows cast by the moon; and they guided the eye, in the absence of daylight, to the most interesting points—the descent to the brook Kedron, the road to Bethany, and the place whence Jesus is believed to have looked over upon the noble city when he pronounced its doom. Such was the view from our terrace.

One of our first walks was along the Via Dolorosa. There is a strange charm in the streets of Jerusalem, from the picturesque character of the walls and archways. The old walls of yellow stone are so beautifully tufted with weeds, that one longs to paint every angle and projection, with their mellow coloring, and dangling and trailing weeds. And the shadowy archways, where the vaulted roofs intersect each other, till they are lost in the dazzle of the sunshine beyond, are a perpetual treat to the eye. The pavement is the worst I ever walked on; large, slippery

stones, slanting all manner of ways. Passing such weedy walls and dark archways as I have mentioned, we turned into Via Dolorosa, and followed it as far as the Governor's House, which stands where Fort Antonia stood when Pilate there tried Him in whom he found, as he declared, no guilt. Here we obtained permission to mount to the roof.

Why did we wish it? For reasons of such force as I despair of making understood by any but those to whom the name of the Temple has been sacred from their earliest years. None but Mohammedans may enter the enclosure now—no Jew nor Christian. The Jew and Christian who repel each other in Christian lands are under the same ban here. They are alike excluded from the place where Solomon built and Christ sanctified the temple of Jehovah; and they are alike mocked and insulted, if they draw near the gates. Of course, we were not satisfied without seeing all that we could see of this place—now occupied by the mosque of Omar—the most sacred spot to the Mohammedans, after Mecca. We could sit under the Golden Gate, outside the walls: we could measure with the eye, from the bed of the brook Kedron, the height of the walls which crowned Moriah, and from amidst which once arose the temple courts: we could sit where Jesus sat on the slope of Olivet, and look over to the height whence the glorious Temple once commanded the Valley of Jehoshaphat, which lay between us and it: but this was not enough, if we could see more. We had gone to the threshold of one of the gates, as far as the Faithful permit the infidel to go: and even there we had insulting warnings not to venture further, and were mocked by little boys. From this threshold we had looked in; and from the top of the city wall we had looked down upon the enclosure, and seen the external beauty of the buildings, and the pride and prosperity of the Mohammedan usurpers. But we could see yet more from the roof of the governor's house; and there we went accordingly.

The enclosure was spread out like a map below us: and very beautiful was the mosque, built of variegated marbles, and its vast dome, and its noble marble platform, with its flights of steps and light arcades; and the green lawn which sloped away all round, and the row of cypress trees under which a company of worshippers were at their prayers. But how could we, coming from a Christian land, attend much to present things, when the sacred past seemed spread before our eyes? I was looking, almost all the while, to see where the Sheepgate was, through which the lambs for sacrifice were brought: and the Watergate, through which the priest went down to the spring of Siloam for water for the ritual pu-

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MONUMENTAL DESIGN FOR GOV. WINTHROP'S TOMB.



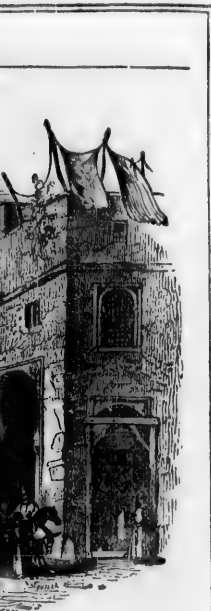


A Street in Jerusalem.

rification. I saw where the Temple itself must have stood, and planned how far the outer courts extended—the Court of the Gentiles, the Court of the Women, the Treasury, where the chest stood on the right of the entrance, and the right hand might give without the left hand knowing; and the place where the scribes sat to teach, and where Christ so taught in their jealous presence as to make converts of those who were sent to apprehend him. I saw whereabouts the altar must have stood, and where arose, night and morning, for long centuries, the smoke of the sacrifices. I saw where the golden vine must have hung its clusters on the front of the Holy Place, and where, again, the innermost chamber must have been—the Holy of Holies, the dwelling-place of Jehovah, where none but the High Priest might enter, and he only once a year. These places have been familiar to my mind's eye from my youth up;—almost as familiar as my own house; and now I looked at the very ground they had occupied, and the very scenery they had commanded, with an emotion that the ignorant or careless reader of the New Testament could hardly conceive of. And the review of time was hardly less interesting than that of place. Here, my thoughts were led back to the early days when David and Solomon chose the ground and levelled the summit of Mount Moriah, and be-

gan the Temple of Jehovah. I could see the lavishing of Solomon's wealth upon the edifice, and the fall of its pomp under invaders who worshipped the sun; and the rebuilding in the days of Nehemiah, when the citizens worked at the walls with arms in their girdles; and in the full glory and security (as most of the Jews thought) of their Temple while they paid tribute to the Romans. O! the proud Mohammedans before my eyes were very like the proud Jews, who mocked at the idea that their temple should be thrown down. I saw now the area where they stood in their pride, and where before a generation had passed away, no stone was left upon another, and the plough was brought to tear up the last remains of the foundations. Having witnessed this heart-breaking sight, the Jews were banished from the city, and were not even permitted to see their Zion from afar off. In the age of Constantine, they were allowed to approach so as to see the city from the surrounding hills;—a mournful liberty, like that of permitting an exile to see his native shores from the sea, but never to land. At length, the Jews were allowed to purchase of the Roman soldiers leave to enter Jerusalem once a year—on the day when the city fell before Titus.

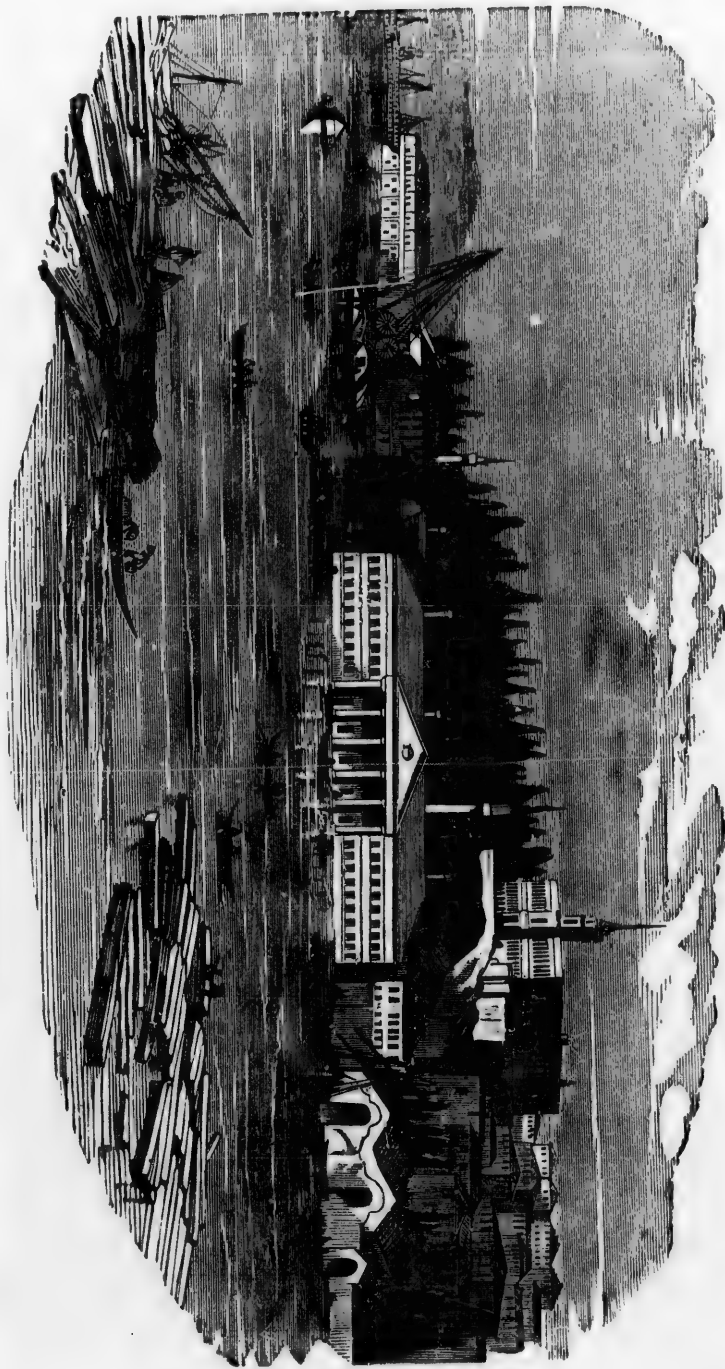
And what to do? How did they spend that one day of the year? I will tell; for I saw



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MARINE ARSENAL, CONSTANTINOPLE



it. The mournful custom abides to this day. I have said how proud and prosperous looked the Mosque of Omar, with its marble buildings, its green lawns, and gayly-dressed people—some at prayer under the cypresses, some conversing under the arcades;—female devotees in white sitting on the grass, and merry children running on the slopes;—all these ready and eager to stone to death on the instant, any Christian or Jew who should dare to set his foot within the walls. This is what we saw within. Next we went round the outside till we came, by a narrow crooked passage, to a desolate spot, occupied by desolate people. Under a high, massive, and very ancient wall was a dusty narrow space, enclosed on the other side by the backs of modern dwellings, if I remember right. This ancient wall, where the weeds are springing from the crevices of the stones, is the only part remaining of the old temple wall; and here the Jews come every Friday to their Place of Wailing, as it is called, to mourn over the fall of their temple, and pray for its restoration. What a contrast did these humbled people present to the proud Mohammedans within! The women were seated in the dust—some wailing aloud, some repeating prayers with moving lips, and others reading them from books on their knees. A few children were at play on the ground; and some aged men sat silent, their heads drooped on their breasts. Several younger men were leaning against the wall—pressing their foreheads against the stones, and resting their books on their clasped hands in the crevices. With some this wailing is no form: for I saw tears on their cheeks. I longed to know if any had hope in their hearts, that they or their children of any generation should pass that wall, and should help to swell the cry, "Lift up your heads, O ye gates, that the King of Glory may come in!" If they have any such hope, it may give some sweetness to this rite of humiliation. We had no such hope for them; and it was with unspeakable sadness that I, for one, turned away from the thought of the pride and tyranny within those walls, and the desolation without, carrying with me a deep-felt lesson on the strength of human faith, and the weakness of the tie of brotherhood.

Alas! all seem weak alike. Look at the three great places of prayer in the Holy City! Here are the Mohammedans eager to kill any Jew or Christian who may enter the Mosque of Omar. There are the Christians ready to kill any Mohammedan or Jew who may enter the church of the Holy Sepulchre. And here are the Jews pleading against their enemies: "Remember, O Lord, the children of Edom in the day of Jerusalem, who said, raze

it, raze it, even to the foundation thereof. O, daughter of Babylon that art to be destroyed, happy shall he be that rewardeth thee as thou hast served us. Happy shall he be that taketh and dasheth thy little ones against the stones!" Such are the things done and said in the name of Religion!

In connexion with what has been already related by Miss MARTINEAU concerning the Mosque of Omar, we here introduce a more particular description, with an engraving drawn from a sketch made on the spot by F. CATHERWOOD, Esq., who spent several years in the Holy Land for the purpose of obtaining views of the various places that have become hallowed to the Christian world.

This splendid building occupies the site of the ancient temple erected by Solomon on "Mount Moriah, where the Lord appeared unto David his father in the place that David had prepared in the thrashing-floor of Ornan," or Araunah, "the Jebusite." (1 Kings, vi., with 2 Chron., iii. 1.) It was erected by the calif Omar, and by the Moslems is reputed to be next in sanctity to the temple at Mecca. When Jerusalem was taken by the crusaders, it was converted into a Christian church; and when they finally abandoned the city, the victorious sultan Saladin caused the whole building to be washed with rosewater, by way of purification, before he would enter it.

The Mosque, which is the finest piece of Saracenic architecture in existence, is a regular octagon, each side being seventy feet in width; it is entered by four spacious doors facing the cardinal points, the Bab el Garb on the west, Bab nebbe Daoud, or Gate of David, on the east, Bab el Kobla, or the Gate of Prayer, on the south, and Bab el Djinna, or the Gate of Heaven, on the north; each of these entrances has a porch of timber-work, of considerable height, excepting Bab el Kobla, which has a fine portico, supported by eight Corinthian pillars of marble; the lower part of the walls is faced with marble, evidently very ancient; it is white, with a slight tinge of blue, and pieces wholly blue are occasionally introduced with good effect; each face is panelled, the sides of the panels forming plain pilasters at the angles; the upper part is faced with small glazed tiles, about eight inches square, of various colors, blue being the prevailing, with passages from the Koran on them, forming a singular and beautiful Mosaic; the four plain sides have each seven well-proportioned windows of stained glass; the four sides of entrance have only six. The roof gently rises toward the perpendicular part under the dome, which is also covered with colored tiles, arranged in various elegant devices. The dome is double; it was

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h is the finest piece of e in existence, is a reg- e being seventy feet in by four spacious doors nts, the Bab el Garb or ound, or Gate of David, Kebla, or the Gate of and Bab el Djinna, or on the north; each of porch of timber-work, t, excepting Bab el Ke- portico, supported by s of marble; the lower aced with marble, evi- t is white, with a slight ces wholly blue are oc- with good effect; each des of the panels form- the angles; the upper all glazed tiles, about of various colors, blue with passages from the a singular and beau- plain sides have each ed windows of stained of entrance have only rises toward the per- the dome, which is also iles, arranged in various done is double; it was

built by Solyman I., of a spherical form; is covered with lead, and crowned by a gilt crescent; the whole is ninety feet in height, and has a light and beautiful effect: the fanciful disposition of the soft colors above, contrasting with the blue and white marble below, is extremely pleasing.

The interior is paved with gray marble; and the walls, which are quite plain, are covered with the same material, of a fine white color. Twenty-four pillars of marble, of a brownish color, form a concentric nave; the eight opposite the angles are square, without ornament; the other sixteen, being two to each face of the octagon, are round, well-proportioned, and about twenty feet in height, with capitals of a composite style, gilt; above is a plain plinth, and twenty-four small arches supporting the roof, which is wrought in compartments, and gilt in exquisite taste. A second circle of sixteen pillars, four square and twelve round, based on an elevation in the floor, to which there is an ascent of four steps, and having capitals, a plinth, and arches, as before, supports the dome, the interior of which is finely painted and gilt in arabesque; from the centre are suspended several antique vessels of gold and silver, offerings of some pious Mohammedans. Immediately beneath the dome, surrounded by a high iron railing, gilt, with only one gate of entrance, is an immense mass of limestone, of an irregular form, probably part of the rock on which the Mosque stands; it is named El Hadjera el Sakhara Allah, the Locked-up Stone of God, and is held in the highest veneration. The tradition respecting it is, that it fell from heaven when the spirit of prophecy commenced; that all the ancients to whom it was given prophesied from it; and that on this rock sat the angel of death, who, upon David's inconsiderate numbering of the people, slaughtered until God "commanded him to put up his sword again into the sheath thereof." (1 Chron. xxi. 7.) At the time the prophets fled from Jerusalem, the stone wished to accompany them, but was prevented by the angel Gabriel, who forcibly held it (the marks of his fingers still remain) until the arrival of Mohammed, who, by his prayers, fixed it for ever to the spot. Mohammed, in the twelfth year of his mission, made his celebrated night journey from Mecca to Jerusalem on the beast el Borak, accompanied by the angel Gabriel, as described in the 17th chapter of the Koran; and having paid his devotions, ascended from this stone to heaven; the rock, sensible of the happiness, became soft, and the print of the prophet's foot remains to this day, an object of great veneration to all true believers. Some years back a portion of the rock was stolen by the Christians; but no

sooner had they got it out of the Mosque than it became invisible to them, and was afterward discovered by the Mussulmans. The rock is enclosed by a low wooden railing, and covered by a canopy of green and red satin; immediately beneath it is a natural chamber, called the "Ennobled Cavern of God," an irregular square chamber, eighteen feet each way, and eight in the highest part, above which is a hole through the rock, called the "Hole of Mohammed." Five small cavities around are inscribed as the places of Solomon, David, Abraham, Gabriel, and St. John. It also contains the Well of Souls, or entrance to the infernal regions. This mosque further contains the praying-place and footstep of our Lord Idris; the praying-place, sword (fourteen feet long), and standard of Ali, nephew of Mohammed; the scales for weighing the souls of men; the shield of Mohammed; the birds of Solomon; the pomegranates of David; and the saddle of El Borak; on a wooden desk, an original copy of the Koran, the leaves of which are four feet in length. In the outer circle there is a well, at which believers wash and drink; and near the western entrance is a slab of green marble, forming part of the floor, which has the marks of having been pierced by eighteen nails of silver; three of these and a portion of a fourth only remain, the others having at different times disappeared, in order to mark the completion of certain great epochs. The remainder are to follow; and when the last takes its departure, the fulness of time will be complete and the world end. It is also said that the nails were pulled out by the devil, in his attempts to enter Paradise by this door.

This Mosque belongs especially to the principal and most respected Mussulman sect, that of the Hanifites (so called from Hanifah its founder), and has been kept sacred from the approach of Christians until very recently. Here, and in the Mosque at Mecca, the Mussulman believes his prayers to be more acceptable to God than anywhere else. It is believed by the Moslems that all the prophets, since the time of Adam, have come here to pray and prophesy; and that even now they come in invisible troops, accompanied by angels, to pray on the Sakhara. The usual guard of this holy stone is seventy thousand angels, who are relieved every day. One hundred and eighty lamps are lighted at night in this Mosque.

POPULAR INSTRUCTION.—To instruct mankind in things most excellent, and to honor and applaud those learned men who perform this service with industry and care, is a duty, the performance of which must procure the love of all good men.

GENIUS SUPERIOR TO THE SWORD.

THE design of the present work is to carry light and knowledge into the "highways and by-ways," and to the very hearths of the people. And what are the people, or any nation, without knowledge? Through the influence of good publications how many are daily snatched from the haunts of vice and immorality? We see them sitting at their firesides, reading or listening to some moral and instructive article. They wonder they have been asleep so long; they are roused to virtuous action; they begin to feel their responsibilities; the appetite for knowledge has commenced—useful and religious books are cheap—a trifle saved out of the hard earnings of the industrious farmer or mechanic, furnishes sufficient aliment for the intellectual man; the way is paved for greater advances, both in a moral and religious point of view.

What a change has been wrought in the last half century! But a few hundred years ago, and the world was sunk in barbarism. Germany, France, Britain, and other European countries, abounded in mighty forests, almost impervious to light; their surface was covered by stagnant pools of water, and wild and dreary morasses, injurious to the health of man, and tenanted by animals that proved civilization to be yet in abeyance. The inhabitants were rude and unlettered; reading and writing, the absolute foundation of all learning and civilization, formed no portion of their education; nor were they governed in any respect by well-defined laws, though tradition and practice had certainly formed the rude outlines of codes that were perhaps sufficient for their wants, or congenial to their tastes and habits. The power that has intervened to change so dark a picture into one of brilliancy and light is Genius. Even now the world would be involved in ignorance to a greater extent than were the Canadas before the discovery of America by Christopher Columbus, were it not that men of genius applied their intellect for the purpose of advancement in arts and science. It is a mistaken notion that ordinary minds act in any way intellectually for the advancement of their kind; too frequently they are a mere drag, and impede progress; in such cases genius has not only to labor to discover the laws of nature, but has likewise to combat the apathy as well as the ignorance of mankind, in order so to overcome prejudice and inertia as to be enabled to apply its inventions to the advantage of its age and of posterity. We do not contend that genius is clogged in its onward progress by all ordinary minds: so far from such being the case, it has in all ages derived vital aid from many who, though incapable themselves of throw-

ing light upon matter hitherto deemed for ever dark, have had, notwithstanding, the most hearty sympathy with men of thought, and have struggled arduously, enduring sacrifices with stern determination, actuated by the love of truth, and filled with anxiety for the regeneration of their fellow-men.

The most simple domestic utensil has caused intense thought in many minds before it could be wrought into its present state, insignificant as it may now seem, after all the time and study that have been bestowed upon it: but when we recollect how slowly improvements take place, even in the present day, considering the amount of intellect applied, one can hardly be astonished. In general conversation in mixed society, Watt is usually termed the inventor of the steam-engine, and admiration is in consequence exclusively devoted to him. Let all praise be given to genius; but we should carefully avoid giving one inventor more than his due, or we detract from the merits of others. Watt invented the condenser. The steam-engine was at work in several mines long before steam was condensed by this invention; and since Watt's time numerous excellent improvements have been made. Thus we observe it took many extraordinary minds a very long time to complete that great work the steam-engine; and even now, if we judge from the improvements continually being effected, it would appear that it is far from perfection. Now what endless gratitude is due to those noble intellects whose workshops have erected such admirable and enourable trophies, and without whose efforts the world at the present time would be but a barren waste, with the human species scarcely elevated above the lower animals. Every step of progress has been gained by the toiling of genius—by the reflections of men of superior endowments. The musket of the soldier has been fashioned, not by himself, but by the application of superior intelligence furnished by the philosopher; and although the general may gain laurels for destroying his thousands, have monuments erected to his memory when dead, and occupy a page in history, yet, be it remembered, the means which he used—the means employed by his troops—were discovered and invented by minds infinitely superior to his own—by an aggregate of mind each individual portion of which, fashioned a link in the chain of progress.

It is fashionable in Europe, and also in this country, to erect monuments to celebrated warriors. The class privileges of the world have grown out of war. There is more feudalism in this day than men think of: a war-loving people must always be beneath the hoof of military despotism; a greater curse to a

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country can not be conceived—it is natural
that it should be so. In a nation whose gen-
eral intelligence is its safeguard and protection,
intelligence will be respected; in a nation
whose trading interests are safeguard and pro-
tection, trade will be respected; in a nation
prone to war, fencing itself all round with the
fort and the pike, and relying upon the genius
of battle for protection, the warrior will be
most respected. Who among us equals the
warrior in honor? Seldom, oh! how seldom,
is the poet or the philosopher pecuniarily re-
warded, or honored with the title of greatness.

Monopoly of legislation, monopoly of trade,
will be found to be children of war. If war
were abolished and brought into disrepute, and
the military man were regarded as a kind of
"Jack Ketch" as he is in China, things would
soon return to their natural level. How ar-
rived this shameful inequality of property in
the Old World, to so alarming a height?
Whence the appalling poverty? Whence the
the pageantry, the magnificence of wealth?
Whence that numerous class, who, though
rich, have neither brilliant talents nor sublime
virtues? Whence the insolence and the
usurpation of the rich, the legislation of
wealth against poverty, and a crowd of dis-
abilities and evils beneath which man is com-
pelled to labor? If we are asked the reason
of all these, how easy to prove that, while
they are the sad fruit of the monster sin, they
are immediately caused by war! War wins
countries, and war grasps them, and the fruits
of the victory are in the pockets of the chil-
dren of warriors; the places of power are
awarded to them; for them the jewelled tiara
and the ermine robe. Who does not perceive
in the war system a complicated machinery,
set up for the purpose of retaining in idleness
the scions of titled warriors, whose names and
wealth may thus be transmitted to a remote
posterity?

Now we do not for a moment contend that
men who were supposed to have rendered
their country essential aid, should be deprived
of any honor that a grateful country can be-
stow. Officers and soldiers often fight, actu-
ated by the purest feelings of patriotism, and
only wishing by sacrificing the foe to add to
their country's glory, losing sight, at the time,
or probably having no idea of their own indi-
vidual accountability hereafter, for each soul
hurried by them, unprepared, into eternity!
Let us, however, waive this strong argument
against war, and see whether upon the old-
fashioned notions of national etiquette and
honor, the present one can be justified or not.
Possibly it can, but if we do not depart from
such notions, "honor" will be a very expen-
sive item. We can maintain this "honor,"
if we will pay for it. We always thought

that at the close of the Revolution, the nation
established for itself a new code of honor, and
rose above the maxims which monarchs found
so convenient for improper purposes. This
was to be our glory, and until the present war,
we were respected everywhere as a people
who, intent on the arts of peace, and distin-
guished by the universality of education, lib-
erty, and competence, would not seek the bat-
tle, nor shun it when it came.

The laboring men, or "producing classes,"
are those who, throughout Christendom, pay
nine tenths of the revenue of their respective
governments. The national debts of the var-
ious Christian countries contracted for wars,
amount in the aggregate to \$7,500,000,000.
The interest on nine tenths of this sum at 5
per cent., is about \$337,000,000. In the next
thirty years the working-men of Christendom
will have to pay \$10,000,000,000 for interest
on this debt. Think how many days' work
this is at 75 cents a day.

This is not all that we pay, for it does not
include the "preparations" for war. For
these, the working-men of Christendom have
paid during the last 32 years, \$21,500,000,000.
This expense is annually growing heavier in
the United States, Britain, France, and many
other countries. A writer, under the signa-
ture of "A Working-Man of America," makes
the following estimate:—

"There are at least 2,500,000 able-bodied
men in the standing armies of Christendom;
all able-bodied men these, according to the
surgeon's certificate, which is never asked,
when men are wanted merely to mow, plough,
and sow, and make stone-wall, or for any vul-
gar utilitarian purpose. Every common sol-
dier is taken from the laboring class; we feel
sure of that. The population embracing the
laboring classes of any country will not aver-
age more than one "able-bodied man," ac-
cording to the surgeon's military standard, to
every ten individuals. Then it would take
out all the able-bodied men from 25,000,000
of the people to raise the standing army of
2,500,000 which has been kept up in Chris-
tendom ever since the day of Waterloo. Now,
instead of being drilled into mere machines
for murder, suppose these 2,500,000 able-
bodied men had been employed in some pro-
ductive labor, even at the low rate of less
than 25 cents a day, the hard-earned money
paid by laboring men since 1815 in preparing
for war, amounts, including interest, to nearly
\$39,400,000,000."

The war appropriations of this country since
the present war with Mexico began, are
\$80,873,062.

The appropriations for the same objects at
the present session of Congress, should the
war continue during the present year, will

probably exceed rather than fall short of fifty millions of dollars.

These estimates say nothing of the value of the poor withdrawn from useful pursuits, and the consequent loss to the country, nor state how many of our people and of the enemy must yearly by these means sink to their graves.

But the pen and not the sword must soon become the weapon of progress. The thinkers are gaining ground; and even now the tide of public feeling toward the progress of the sword, is somewhat slackening in its course; and we believe there will soon be a radical and permanent change in the feelings of mankind, on this and kindred topics. Men of thought—men of genius—are now looked up to with reverence and love. The inventor of the simplest aid in the cause of human progress will soon be regarded as one of the benefactors of mankind.

What progress, however, can a people make in the cause of peace and humanity, so long as the doctrines of Christianity are represented as upholding, or rather justifying war and revenge? The fruits of such teachings can easily be conceived. We can not be the genuine descendants of the pilgrim fathers or William Penn, for their spirit and conduct had no share in the formation of these sentiments, at least as understood and practised by many at the present day. But let us hope, that with the progress of time, the increasing intelligence of the age, and the growing veneration for that sublime and heavenly doctrine which teaches us to "forgive our enemies, persecutors, and slanderers," and to pray that their "hearts may be turned;" in accordance with that religion which was given to establish "peace on earth, and good-will toward man," these sentiments will soon be among the things that are past; and that in this country, and throughout the Christian world, at least, the sentiment of the heart may be more in unison with the language of the lips: "Forgive us our trespasses, as we forgive those who trespass against us." When we shall utter this prayer with sincerity of heart, and act up to the principles of Christianity, as well as profess them, wars, duels, and other evils, will be banished from the world, and forgiveness of injuries be regarded as more dignified and noble than murder and revenge.

SELF-LOVE is a principle in human nature of such extensive energy, and the interest of each individual is, in general, so closely connected with that of the community, that the philosophers were almost excusable, who fancied that all our concern for the public might be resolved into a concern for our own happiness and preservation.

WOMAN.

Is all the exciting scenes of life, woman is the most sensitive. If they be joyous, she is the first to smile; if they be sorrowful, she is the first to weep. When a company have assembled, when all is unbroken silence, and the men seem not to know what to say, nor how to say it, her animated tongue is the first to relieve the embarrassment, enliven the scene, and set all other tongues in motion. Whatever may be the ceremony, she is the first to enter into the spirit of the occasion. In the moment of danger she is the most conscious, yet the most self-possessed, while she most skilfully parries the impending blow. In love, she is the most ardent, yet the most modest.

Amid the domestic trials of her household, hers are the first and deepest pangs; yet she is the most patient under them. In the afflictions of others, her warmer heart is the first to sympathize, while her kinder hand is first extended to bless, to solace, and to save. However evil association may sometimes pervert her nature, these traits are her instinctive, primeval virtues, which, while they elicit the profound respect of man, claim for her his sympathy and prompt assistance, under all the trying circumstances of life, whether he happen to be a brother, a neighbor, or a stranger. The Americans are noted for their civility to the ladies, above the people of all other nations; yet more kindness would be still better, and more just as well as more natural.

Woman is the first to befriend and the last to desert. Like Mary, "she is last at the cross and first at the grave." The greater a man's misfortunes, the deeper his disgrace, the more he is forsaken by the world, the closer she clings to him, even more eager to share his sorrows than his joys. Though his path lead through flowery plains of pleasure, or the shadowy vale of sorrow, yet to the very brink of the grave is she found close by his side, and though barren and dreary be their journey of life, she gathers as she goes the few isolated flowers that grow by the way, with which she tries to comfort him, AND THOUGH HER HEART BE BREAKING, CHEERS HIM WITH HER SMILES. As the meteor shines brighter with the increasing darkness, so her benign spirit sheds its brightest lustre upon his darkest hours.

When man's path in life is beset with troubles on every hand—when his spirit is borne down to the earth—when none else would heed his cries, and he is about to faint by the way—when life is a burden, and relief can now be found but in death—then woman flies to his rescue, and with that sweetest balm

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for a wounded spirit—with her words of con-
solation, she revives the courage that is about
to falter, soothes the heart that is ready to
break, and, as a blessed convoy, by her smile
and song, leads him gently and safely through
all the bleak deserts of life.

When man looks back upon the troubled
sea of life—when he beholds its mountain
surges about to overwhelm him—and when,
as he starts forward, he sees the Jordan of
Death lying before him—when he is about to
sink down in despair and die, woman comes
as his deliverer, and by her tears and prayers,
opens a way for his escape!

As the lily is borne down beneath the wa-
ters by the rapid current, and yet rises again
to adorn the surface of the stream—as the
rose is crushed to the earth, and yet rises
again with an elastic spring, to gladden with
its beauty the eye of him who had humbled
it—so woman, like the lily, is submerged be-
neath the waves of the troubled waters of
life, yet her buoyant spirit rises again above
them—so woman, like the rose, is crushed
beneath the iron heel of the tyrant man (made
a tyrant by the intoxicating draught), yet
she rises again to resume the duties of her
household, as if nothing had happened—to
feed and clothe the man who had robbed both
her and her helpless offspring of their own
food and moment—daily to forgive his daily
crimes and to kiss the lips that cursed her,
and press the hand that smote her!

Though she rise at early dawn, and toil on
till her midnight lamp goes out, only for want
of means to replenish it, slowly to earn what
he so quickly spends, for that which rewards
her industry—not, as she had hoped, with the
comforts of life, but with its worst miseries.
Though with a broken heart, and weeping
eyes, and feeble hands, she earns money to
buy bread, which he expends for that which
draws down violence upon her own head, and
though under the influence of "liquid poison,"
the duties of a mother, yet in the forgiving spirit
of her mother, at the cross, she exclaims,
"He knows what he does! he is not him-
self!" While she patiently drinks the cup
of misery, he presents to her its very dregs,
and though he robs her of everything dear to
life, she can not or will not believe him her
enemy! If, by dissipation, he reduce her to
poverty and abject want—while her children
are crying for bread, she forbears to partake
of the scanty repast, though she starve her-
self, till she has appeased the hunger of her
famishing family. However heartrending her
troubles, she patiently bears them, while her
noble spirit forbears to call for assistance.

She not only binds up the wounds of her
own household, but wanders forth into the
world to seek for other objects of charity.

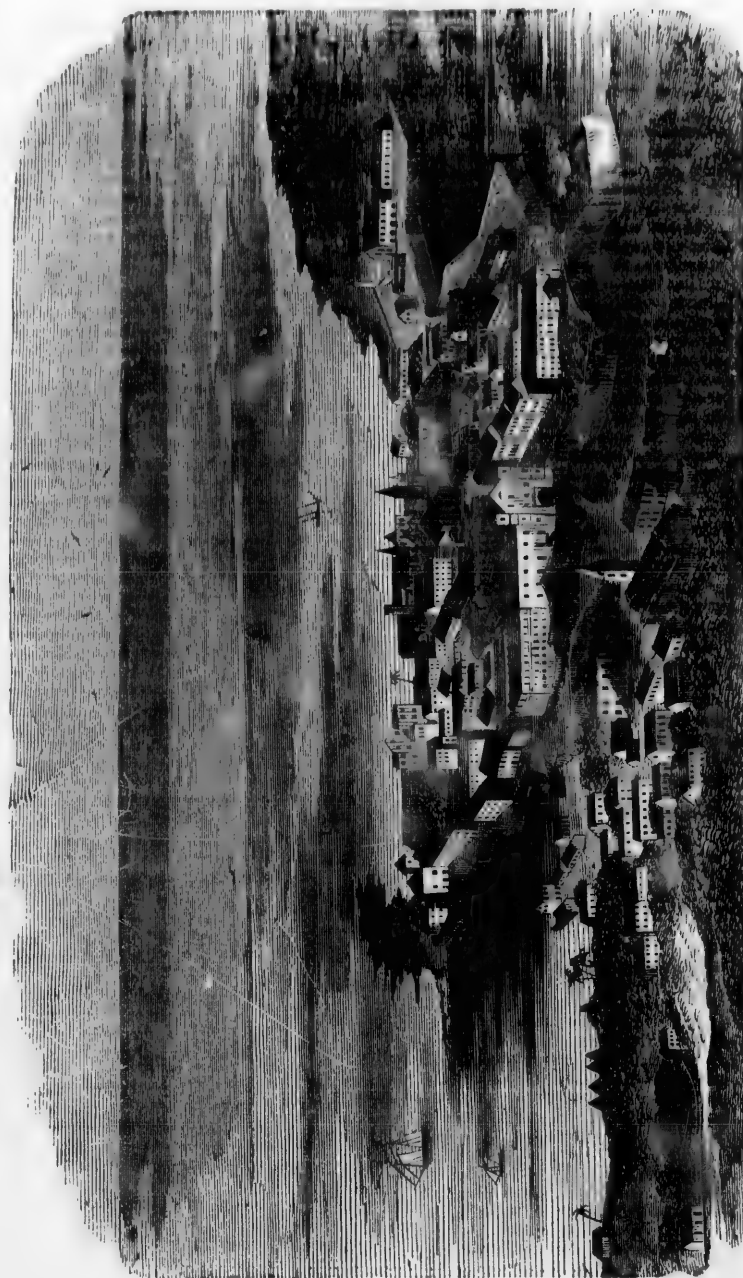
She foregoes her own comfort to promote the
comfort of others, and perils her own life to
save others—as did the Mexican woman,
dead on the battle-field in Mexico, as she
carried water between the two contending ar-
mies, with which she moistened the parched
lips of the wounded and dying, not only of
the Mexicans, but of the Americans also.
Thus did the mercy of woman cope with the
cruelty of men, by striving to soothe the
wounds of both parties, while fresher wounds
were yet being inflicted by both! Woman-
like, with the impartial sympathy of true be-
nevolence—God-like, in the noble and divine
spirit of her Savior, she stayed not her hand
in her work of mercy till she had blessed both
friends and enemies, and offered up her life in
the cause of suffering humanity!

Where woman is, there is home. Hard is
the fate of that man who hath not the sweet
counsels of woman to ease his varied trials,
and soften the asperities of life—nor her
cheering smiles, as a mental sunshine, to chase
away the clouds of despondency that rest
upon his soul. And how hard is the death
of that man who hath not woman by his side
in the character of a sister, wife, or mother,
as a visible guardian angel, to smooth his dy-
ing pillow—to wipe the death-damp from his
brow—to clasp his pale hand—to bedew with
his tears his burning cheek—to kiss his quiv-
ering lips, and to whisper an affectionate
adieu to his sinking spirit as it recedes from
the world, into the dark unfathomable and
unknown abyss of death!

STEUBENVILLE, OHIO.

This lively place, which has wholly grown
up with the present century, does all in its
power, which is not inconsiderable, to ac-
quire the size and bulkiness of other and
older cities. It took to itself the west bank
of the Ohio, together with scenery of the
fairest kind upon this fairest of rivers. It
commenced with great order and regularity
to build itself up in a proper and convenient
city-like manner, and thence has continued
steadily and rapidly to advance. It has, like
all other American towns however small, its
churches, academies, printing-offices, and
manufactories, each and all sufficient for the
needs and enterprise of a growing population.
In 1830 its population was 2,937; in 1840,
5,203.

The name of this place is one of the few
names of foreign origin which we recognise
with feelings of grateful pleasure. It was so
named in honor of Baron Steuben, a most gal-



CITY OF PANAMA.



CITY OF PANAMA.

lant and efficient officer of the revolutionary army.

Frederic William, or, as he was generally called, Baron Steuben, was a distinguished Prussian, of birth and eminence that might entitle him to the highest honors in his own country, which he abandoned, as did Lafayette, to fight in the ranks of freedom in America. He had been an aid to the great Frederic, where he could not but learn the most exact military discipline, the most accomplished mode of battering down walls of flesh and blood.

The skill and hardihood thus acquired were of inestimable value to the American army. Steuben, who had modestly offered himself as ready to take any position where he could best serve the great cause of human freedom, was at once appointed inspector-general, with the rank of major-general; and perhaps he did more than any other man, during the whole of the eventful period from 1777 to the close of the war, to introduce a system of uniform military tactics among the brave and devoted, but most raw and undisciplined men comprising the army of the Revolution. Steuben fought at the battle of Monmouth, and commanded the trenches at Yorktown. He was almost adored by the soldiery, such was his goodness of heart combined with his courteous and soldier-like manners. At the close of the war, a veteran who had fought under him, went the distance of some leagues to acquaint the general of his recent state of paterfamilias, and that he had named the child after his old commander. "And what do you call the boy?" asked Steuben. "Why, Baron, to be sure, your honor."

Steuben found himself poor, as did all other patriots, at the close of the war. Eventually, the state of New York granted him an extensive tract of land, and congress voted him a reward of some thousands. He died upon a farm in the vicinity of New York, and was buried, according to his own orders, in his military cloak, in a nameless grave.

WASHINGTON'S RESIDENCE IN NEW YORK.

From the Recollections and Private Memoirs of the Life and Character of WASHINGTON, by his adopted son, G. W. P. CURTIS, Esq., we extract the following account of Washington's residence in New York:—

On the 30th of April, 1789, the constitutional government of the United States began, by the inauguration in the city of New York,

of George Washington as president of the United States.

In the then limited extent and improvement of the city, there was some difficulty in selecting a mansion for the residence of the chief magistrate, and a household suitable to his rank and station. Osgood's house, a mansion of very moderate extent, situated in Cherry street, was at length fixed upon. There the president became domiciled. His domestic family consisted of Mrs. Washington, the two adopted children, Mr. Lear as principal secretary, Colonel Humphreys, with Messrs. Lewis and Nelson, secretaries, and Major Wm. Jackson, aid-de-camp.

Persons visiting the house in Cherry street at this day will wonder how a building so small could contain the many and mighty spirits that thronged its halls in olden days. Congress, cabinet, all public functionaries, in the commencement of the government, were selected from the very elite of the nation. Pure patriotism, commanding talent, eminent services, were the proud and indispensable requisites for official station in the first days of the republic. The first congress was a most enlightened and dignified body. In the senate were several of the members of the congress of 1776 and signers of the Declaration of Independence—Richard Henry Lee, who moved the Declaration, John Adams, who seconded it, with Sherman, Morris, Carroll, &c.

The levees of the first president were attended by these illustrious patriots and statesmen, and by many other of the patriots, statesmen, and soldiers, who could say of the Revolution, "*magna pars fui*;" while numbers of foreigners and strangers of distinction crowded to the seat of the general government, all anxious to witness the grand experiment that was to determine how much rational liberty mankind is capable of enjoying, without said liberty degenerating into licentiousness.

Mrs. Washington's drawing-rooms, on Friday nights, were attended by the grace and beauty of New York. On one of these occasions an incident occurred which might have been attended by serious consequences. Owing to the lowness of the ceiling in the drawing-room, the ostrich feathers in the head-dress of Miss M'Iver, a belle of New York, took fire from the chandelier, to the no small alarm of the company. Major Jackson, aid-de-camp to the president, with great presence of mind and equal gallantry, flew to the rescue, and by clapping the burning plumes between his hands extinguished the flames, and the drawing-room went on as usual.

Washington preserved the habit, as well in public as in private life, of rising at four o'clock and retiring to bed at nine. On Sat-

urdays he rested somewhat from his labors, by either riding into the country, attended by a groom, or with his family in his coach drawn by six horses.

Fond of horses, the stables of the president were always in the finest order, and his equipage excellent both in taste and quality. Indeed, so long ago as the days of the viceroyal court of Lord Botetourt, at Williamsburg, in Virginia, we find that there existed a rivalry between the equipages of Colonel Boyd, a magistrate of the old regime, and Colonel Washington—the grays against the bays. Bishop, the celebrated body-servant of Braddock, was the master of Washington's stables. And there were what was termed *muslin horses* in those old days. At cockcrow the stable-boys were at work; at sunrise Bishop stalked into the stables, a muslin handkerchief in his hand which he applied to the coats of the animals, and if the slightest stain was perceptible upon the muslin, up went the luckless wights of the stable-boys, and punishment was administered instant; for to the veteran Bishop, bred amid the iron discipline of European armies, mercy for anything like a breach of duty was altogether out of the question.

The president's stables in Philadelphia were under the direction of German John, and the grooming of the white chargers will rather surprise the moderns. The night before the horses were expected to be rode, they were covered entirely over with a paste of which whiting was a component part; then the animals were swathed in body-cloths, and left to sleep on clean straw. In the morning the composition had become hard, it was well rubbed in, and carried and brushed, which process gave to the coats a beautiful, glossy, and satin-like appearance. The hoofs were then blacked and polished, the mouths washed, teeth pricked and cleaned; and the leopard-skin housings being properly adjusted, the white chargers were led out for service. Such was the grooming of ancient times.

There was but one theatre in New York in 1798 (in John street), and so small were its dimensions that the whole fabric might easily be placed on the stage of one of our modern theatres. Yet humble as was the edifice, it possessed an excellent company of actors and actresses, including old Morris, who was the associate of Garrick, in the very outset of that great actor's career at Goodmanfields. The stage-boxes were appropriated to the president and vice-president, and were each of them decorated with emblems, trophies, &c. On the play-bills were the words, "*Vivat Republica*." Washington often visited this theatre, being much gratified by Wignell's performance of *Darby* in the *Poor Soldier*.

It was in the theatre in John street that the now national air of "Hail Columbia," then called the "President's March," was first played. It was composed by a German musician, named Fyles, the leader of the orchestra, in compliment to the president. The national air will last as long as the nation lasts, while the meritorious composer has been long since forgotten.

It was while residing in Cherry street that the president was attacked with a severe illness, that required a surgical operation. He was attended by the elder and the younger Drs. Bard. The elder being somewhat doubtful of his nerves, gave the knife to his son, telling him to cut away—"deeper, deeper still; don't be afraid; you see how well he bears it." Great anxiety was felt in New York at this time, as the president's case was considered extremely dangerous. Happily, the operation proved successful, and the patient's recovery removed all cause of alarm. During the illness a chain was stretched across the street, and the sidewalks laid with straw. Soon after his recovery, the president set out on a tour through the New England states.

The president's mansion was so limited in accommodation that three of the secretaries were compelled to occupy one room—Humphreys, Lewis, and Nelson. Humphreys, *ad-camp* to the commander-in-chief at Yorktown, was a most estimable man, and at the same time a poet. About this period he was composing his "Widow of Malabar." Lewis and Nelson, both young men, were content, after the labors of the day, to enjoy a good night's repose. But this was often denied them; for Humphreys when in the vein, would rise from his bed at any hour, and with stentorian voices, recite his verses. The young men, roused from their slumbers, and rubbing their eyes, beheld a great burly figure "*en chemise*," striding across the floor, reciting with emphasis particular passages of his poem, and calling on his room-mates for their approbation. Having in this way for a considerable time "murdered the sleep" of his associates, Humphreys, at length wearied by his exertions, would sink upon his pillow in a kind of dreamy languor. So sadly were the young secretaries annoyed by the frequent outbursts of the poet's imagination, that it was remarked of them by their friends, that from 1789 to the end of their lives, neither Robert Lewis nor Thomas Nelson were ever known to evince the slightest taste for poetry.

The mansion in Cherry street proving so very inconvenient, induced the French ambassador to give up his establishment—M. Comb's new house in Broadway—for the accommodation of the president. It was from

this house that Washington in 1790 took his final departure from New York. It was always his habit to endeavor, as much as possible, to avoid the manifestations of affection and gratitude that met him everywhere. He strove in vain; he was closely watched and the people would have their way. He wished to have slipped off unobserved from New York, and thus steal a march upon his old companions in arms. But there were too many of the dear glorious old veterans of the Revolution at that time of day in and near New York to render such an escape even possible.

The baggage had all been packed up; the horses, carriages, and servants ordered to be over the ferry in Paulus Hook by daybreak, and nothing was wanting for departure but the dawn. The lights were yet burning, when the president came into the room where his family were assembled, evidently much pleased in the belief that all was right, when, immediately under the windows, the band of the artillery struck up Washington's March. "There," he exclaimed, "it's all over; we are found out. Well, well, they must have their own way." New York soon after appeared as if taken by storm; troops and persons of all descriptions, hurrying down Broadway toward the place of embarkation, all anxious to take a last look on him whom so many could never expect to see again.

The embarkation was delayed until all complimentary arrangements were completed. The president, after taking leave of many dear and cherished friends, and many an old companion in arms, stepped into the barge that was to convey him from New York for ever. The coxswain gave the word, "Let fall;" the spray from the oars sparkled in the morning sunbeam; the bowsman shoved off from the pier, and the barge swung round to the tide; Washington rose, "uncovered in the stern, to bid adieu to the masses assembled on the shore: he waved his hat, and in a voice tremulous from emotion, pronounced farewell. It may be supposed that Major Beuman, who commanded the artillery on the interesting occasion, who was first captain of Lamb's regiment, and a favorite officer of the war of the Revolution, would, when about to pay his last respects to his beloved commander, load his pieces with something more than mere blank cartridges. But ah! the thunders of the cannon were completely hushed when the mighty shout of the people arose that responded to the farewell of Washington. Pure from the heart it came; right up to heaven it went, to call down blessings upon the Father of his country.

The barge had scarcely gained the middle of the Hudson when the trumpets were heard

at Paulus Hook, where the governor and the chivalry of New Jersey were in waiting, to welcome the chief to those well-remembered shores. Escorts of cavalry relieved each other throughout the whole route, up to the Pennsylvania line; every village and every hamlet turned out its population to greet with cordial welcome the man upon whom all eyes were fixed, and in whom all hearts rejoiced.

What must have been the recollections that crowded on the mind of Washington during that triumphant progress? Newark, New Brunswick, Princeton, Trenton! What a contrast between the glorious burst of sunshine that now illuminated and made glad everything around these memorable spots, with the gloomy and desolate remembrance of 1776! Then his country's champion, with the wreck of a shattered host, he was flying before a victorious and well-appointed foe, while all around him was shrouded in the darkness of despair; now in his glorious progress over the self-same route, his firm footstep presses upon the soil of an infant empire, reposing in the joys of peace, independence, and happiness. Among the many who swelled his triumph, the most endeared to the heart of the chief were the old associates of his toils, his fortunes, and his fame. Many of the revolutionary veterans were living in 1790, and by their presence gave a dignified tone and character to all public assemblages: and when you saw a peculiarly fine-looking soldier in those old days, and would ask, "To what corps of the American army did you belong?" drawing himself up to his full height, with a martial air, and back of the hand thrown up to his forehead, the veteran would reply: "Life-Guard, your honor."

And proud and happy were these veterans in again beholding their own good Lady Washington. Greatly was she beloved in the army. Her many intercessions with the chiefs, for the pardon of offenders; her kindness to the sick and wounded; all of which caused her usual arrival in camp to be hailed as an event that would serve to dissipate the gloom of the winter-quarters.

Arrived at the line, the New Jersey escort was relieved by the cavalry of Pennsylvania, and when near to Philadelphia the president was met by Governor Mifflin and a brilliant cortege of officers, and escorted by a squadron of horse to the city. Conspicuous among the governor's suite, as well for his martial bearing as for the manly beauty of his person, was General Walter Stewart, a son of Erin, and a gallant and distinguished officer of the Pennsylvania line. To Stewart as to Cadwallader, Washington was most warmly attached; indeed, those officers were among the very choicest of the contributions of

Pennsylvania to the army and cause of independence. Mifflin, small in stature, was active, alert, "every inch a soldier." He was a patriot of great influence in Pennsylvania in the "times that tried men's souls," and nobly did he exert that influence in raising troops, with which to reinforce the wreck of the grand army at the close of the campaign of 1776.

Arrived within the city, the crowd became immense; the president left his carriage and mounted the white charger; and, with the governor on his right, proceeded to the city-tavern in Third street, where quarters were prepared for him, the light-infantry, after some time, having opened a passage for the carriages. At the city-tavern the president was received by the authorities of Philadelphia, who welcomed the chief-magistrate to their city as to his home for the remainder of his presidential term. A group of old and long-tried friends were also in waiting. Foremost among these, and first to grasp the hand of Washington, was one who was always nearest to his heart, a patriot and a public benefactor, Robert Morris.

After remaining a short time in Philadelphia, the president speeded on his journey to that home where he ever found rest from his mighty labors, and enjoyed the sweets of rural and domestic happiness amid his farms and at the fireside of Mount Vernon.

Onward, still onward, whirls the tide of time. The few who yet survive that remember the Father of his Country are fast fading away. A little while and their gray heads will all have dropped into the grave.

VIEW OF NIAGARA FALLS,

FROM CLIFTON HOUSE.

THE most comprehensive view of Niagara is, no doubt, that from the galleries of the Clifton House, on the Canada side of the falls; but it is, at the same time, for a first view, one of the most unfavorable. This house stands nearly opposite the centre of the irregular crescent formed by the falls; but it is so far back from the line of the arc, that the height and grandeur of the two cataracts, to an eye unacquainted with the scene are deceptively diminished. After once making the tour of the points of view, however, the distance and elevation of the hotel are allowed for by the eye, and the situation seems most advantageous. In crossing the river, below the falls, however, the height, extent, and volume of the grand panorama can be more distinctly realized.

LECTURES ON ASTRONOMY.—No. 1.

BY PROFESSOR O. M. MITCHELL.

[We propose to give in *June* of the succeeding parts of our work, the most interesting and valuable portions of the lectures on Astronomy, delivered in New York, by Prof. MITCHELL, and ably reported for the New York Tribune. These lectures embrace an exposition of the great problem of the universe, the mechanism of the solar system, and the constitution of the starry heavens, with an account of the great modern discoveries, and the influence of theories. Prof. MITCHELL has been engaged several years in establishing an observatory at Cincinnati, for the cultivation and diffusion of astronomical science, and has erected one which will vie in excellence with the best in the Old World.]

When we look upon the heavens—when we watch the movements of those silent orbs—when we wing our flight upward, and take in the immense range by which we are surrounded, even extending beyond the narrow limits of human vision—can we contemplate the scene without being filled with wonder and astonishment? This same scene opened upon the first eye that was permitted to see the light: and from that hour, down through long-succeeding ages, this wondrous scene above us has ever fastened the attention and directed the gaze of the best and most wonderful minds that have adorned this earth. The science to which I would direct your attention is one which has furnished the theme for the investigation of the most exalted intellects in every age; and from the earliest observation down to the present moment, we find the human mind occupied in its efforts to solve these mysteries—grasping the most difficult problems, and sternly pushing its investigations onward and onward, until darkness disappears and light—even a flood of light—breaks in from the heavens upon the victorious soul. And thus it must ever be. God has given these works for our examination, and has given to us intellect by which we are enabled to comprehend their structure; and it is by this that we are enabled to rise—to climb—to ascend—to soar, by our own efforts and by His aid, till we stand upon a lofty summit, whence we look out upon the wonders by which we are surrounded, and behold the evidences of His wisdom, power, and glory, who has created all things in beauty and perfection.

Allow me now to direct your attention to the scale upon which the universe is built, and to the grand problem involved in solving the mysteries by which it is surrounded.

First, let me inquire if there be laws governing the movements of all these bodies, and

TRONOMY.

TRONOMY.—No. 1.

M. MITCHELL.

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Niagara Falls, viewed from the Clifton House.



if it is possible to ascertain the nature of these laws? Are they to be comprehended by the human mind? or are they beyond the reach of the intellect which has been given us? I answer, they are not: they are within our reach, and we are permitted to understand them; and in understanding them we are permitted to extend onward and onward in our career of examination and discovery.

The first law to which I direct your attention is the law of motion. If a body be located in space, and receive a single impulse, it will move on for ever in a right line, and always maintain its onward career, never turning to the right nor left, and never relaxing its speed. Now, is this a necessary law of matter? I answer, it is. There is no necessity why this law, in preference to any other, should have been adopted. It is the wisdom of God which has assigned this law to motion. But why should not this motion be retarded and relax, and decline, and gradually die away? Such laws govern other motions, and why not in this case?—Again, we have the law of gravity; and what is this? It is a law which tells us that every particle of matter in the universe attracts every other particle with a force which varies in proportion to the mass, and decreasing in a certain ratio with the distance. This is a second law.—Another law is this: Every revolving body, in sweeping about from its centre, has a tendency to fly from that centre with a certain force called centrifugal force. Now, combining these three together, we have all the laws which govern the movements and guide the motions of the heavenly bodies. These are simple and easily understood.

Then, with these laws at our command, let us examine the structure of our own system—for this shall be our type and model—and, passing on, let us essay to reach, if possible, the limits of the universe. Now, then, to view our system, let us move to the sun and locate ourselves on that immense orb. What do we find? A vast globe, 880,000 miles in diameter. Here we fix our point of observation. At the distance of 95,000,000 miles, far as the eye can reach, there is a ball reflecting back the light thrown upon it from its great centre. That ball receives an impulse under the action of that force by which it would move for ever in a right line, but the attractive power of the sun seizes it, and lo! a planet, bathed in the light of its controlling luminary, is sweeping in its orbit, onward and onward in its swift career, until it comes back to the point whence it started. Has its velocity been diminished? has it lost any of its motion? No. With the same velocity with which it set out it reaches its starting-point, and onward moves again.

Now, suppose we were, if it were possible, to fix golden rings in the path of this moving body, of such diameter that it might pass through with not a solitary hair's-breadth to spare. Such is the beauty and perfection of its motion that from century to century, and from age to age, this solitary planet would swing in its orbit around the sun, passing uniformly and invariably through these golden rings with no shadow of variation from its first motion. But stay: while this planet is revolving in the distance, we find another small globe, with dim and diminished light, commencing its movement, subordinate and controlled by the movement of its central body—the planet. There is a satellite—the moon—added to the first body, the two sweeping onward, but alas! the accuracy of the original motion of the planet is destroyed for ever. It no longer sweeps through these golden rings. As the moon passes in between it and the sun, it adds its force of attraction to that of the sun, and the earth is drawn inward, no longer passing through the points it once so unerringly visited. As the moon swings round on the opposite side, it draws the earth farther from its orbit; and thus we find oscillations backward and forward—perturbations and disturbances—which it would seem no human intellect can grasp or unravel.

But this has been done. Go back 3,000 years—stand upon that mighty watch-tower, the temple of Belus in old Babylon—and look out. The sun is sinking in eclipse, and great is the dismay of the terror-stricken inhabitants. We have the fact and circumstances recorded. But how shall we prove that the record is correct? The astronomer unravels the devious movements of the sun, the earth, and the moon, through the whole period of 3,000 years—with the power of intellect he goes backward through the cycles of thirty long centuries—and announces that at such an hour on such a day—as the Chaldean has written—that eclipse did take place.

Such is the character of the knowledge we have attained with reference to the movements of these bodies. But we must go still farther. I announced to you that the law of gravitation declares that every particle of matter in the universe attracts every other particle. Now then, add to the system we have imagined, two interior primary planets, Mercury and Venus—the planet Mars on the outside—and the seven asteroids now revolving between the planets Mars and Jupiter: add to these Jupiter with his four moons. Saturn with his mighty orb of 79,000 miles diameter—add his moons and rings also: go still farther till you reach Uranus—add his moons: step out still farther to the utmost boundaries now known of our solar system, and bring in

that wonderful, mysterious body known as the planet Neptune, whose history is as yet more wonderful and strange than any other belonging to our system: add all these together—let each one of these bodies act upon every other, and then, is it possible for the human mind to grasp the laws which hold all these bodies in their orbits? Can it roll back the tide of Time, and tell you that a thousand years ago, such and such were the configurations of all these planets and satellites? and not only that, but draw aside the veil from the future and show a thousand years hence, that such and such shall be their configurations? With all their disturbing influences, can such truth be eliminated, and the whole rendered clear, perfect, harmonious, and beautiful? Yes: even *this* has been accomplished.

But we have not exhausted the problem of our system even yet. I have only taken into account the planets and satellites belonging to our own system. There are other mysterious bodies, which seem not to obey the laws that govern these movements. While the planets are circular in their orbits and the satellites nearly the same, we find dim, mysterious bodies, wandering through the uttermost regions of space—we see them coming closer and closer, and as they approach our system, they fling out their mighty banners, wing their lightning flight around the sun and speed away to the remotest limits of vacuity. These eccentric bodies—these comets—belong to our solar system, and form a part and parcel of the whole: each and every one of these must be taken into account in resolving the mighty problem of the universe. And they are not to be counted by tens, nor hundreds, nor thousands: their number is not less than millions. Neither do they revolve in the same plane on which the planets roll, nor in the same direction. While all the planets sweep around the great centre regularly and harmoniously, we find the comets pouring in from every possible point, forming every possible angle, and passing out in every possible direction. And yet the perturbations occasioned by these wandering bodies in their long journeys of thousands of years have to be made out.

At this very time, the whole astronomical world is intensely interested in watching the return of one of these wonderful bodies. Two hundred and ninety years ago, it visited our system for a short space. The two hundred and ninety years—its computed period—are now nearly expired, and at this time every telescope on our globe is directed with the utmost intensity of anxiety to that particular region in space where it is believed the stranger will first make his appearance. Think,

that we should be able to trace the invisible, unknown movement of these almost spiritual bodies, and be able to announce their return with a degree of accuracy that astonishes every intellect! And yet this is the fact.

But to what distances do these bodies penetrate into space? When we remember that the periodic time of the most distant of our planets (Neptune, 2,700,000,000 miles from the sun) is but 167 years, and that the period of some of these comets is not short of three or four thousand years, how immense must be the distance to which they recede from our sun!

Now, retaining in your minds the fact I have stated—that every particle of matter attracts every other particle—and that if these comets, in sweeping out to this immense distance, fall under the influence of other suns, they are gone from us, never to revisit our system again: is it possible, then, that there are other systems which do not interfere with ours and with each other? Is it possible that these forever-wandering bodies do not come under the influence of other suns? Is space so boundless—is the universe so limited—that there is room for more than one of these mighty systems? To this point I would ask your attention. You see thus a partial development of the scale upon which the solar system was created, and you can begin to appreciate the nature of the problem of the universe which has been so far solved, that man might attain a knowledge of the system with which he is, in his physical nature, so intimately associated.

But there are other objects than planets and comets filling the heavens. Look out upon the millions of stars in beautiful constellations. Behold these magnificent groups in every point of the heavens. Trace out that mysterious and curiously-wrought band, stretching from one end of the sky to the other—the Milky Way. Give aid to the delighted eye, and through the space-annihilating telescope see millions and millions of suns flashing upon the dazzled sight at once. Surely these bodies are clustered near together? They are not separated from each other by the same amount of space as we appear to be separated from them?

Let us examine this for a moment: the astronomer, in order to find his distance from any heavenly body, ascertains precisely the point in the heavens where that body is located. For instance: should we desire to ascertain the distance of the moon from the earth, we should locate one astronomer at a given point on the earth with his telescope directed to the moon: another astronomer we station at a place far distant from the first, with his line of sight also on the moon at the

same instant of time. The angle of the visual ray with a perpendicular to the earth's centre is carefully noted by each observer; and when this angle is found (the base of their triangle being their distance apart) it is easy to tell at what distance from the earth the protracted sides would meet—and that point of junction will be the centre of the moon.

Now let us try the same with regard to the fixed stars and see whether any results are ascertained. We locate two observers 8,000 miles apart (one on each side of the earth); and from these two points they direct their visual rays to yonder distant orb; but alas! the lines are absolutely parallel. The astronomer is foiled—he gains no point whose distance he can estimate. What now is to be done? He makes the earth itself a grand travelling observatory, and at the extremity of the diameter of the earth's orbit, at the end of six long months, when the earth shall have swung itself halfway round the sun, at the immense distance of 200,000,000 miles he again sends up his visual ray. And now he has a base of 200,000,000 miles—surely the angle at the vertex of this immense triangle will reveal the distance! But, alas! again it is almost insensible; and if it be sensible at all, it can not be so great as to bring the nearest of the stars nearer than sixty billions (60,000,000,000,000) of miles! With this immense space intervening is there danger that the comets shall rush against our neighboring suns, even in their long journeys of thousands of years? I think not.—And this is another illustration of the immense scale upon which the universe is built. Now, having reached outward to the nearest of these objects, let us stand and contemplate the scene by which we are surrounded. Yonder shines Orion, with his broad and beautiful belt, and yonder is the Northern Bear. These groups—so familiar to us—are always delightful to the eye. Go with me until we reach that beautiful star in the northern heavens—Lyra. From that point look out, and what do you behold? Is there any change? Surely there is a new heavens! Yonder is old Orion's belt, gleaming with the same beautiful stars and arranged in precisely the same order as when we left our native earth. All the change is no more than would be made by a change of position with your neighbor upon your own planet.

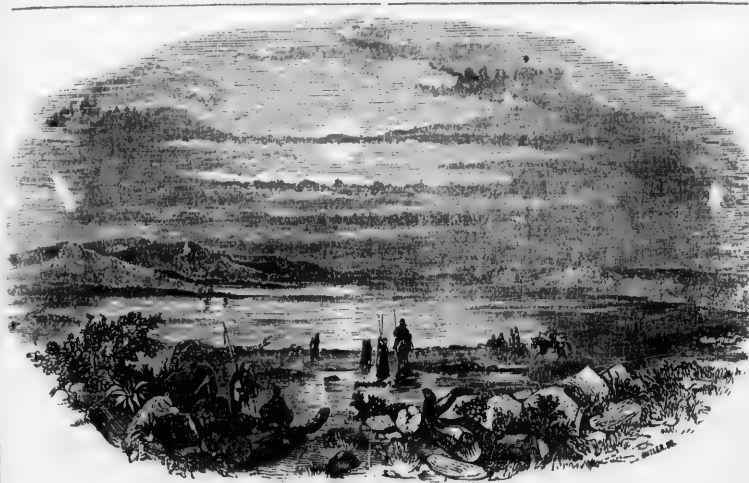
And having gained this unit of measure, we are enabled to go on to the next, till finally in one unbroken succession we find them extending outward, and outward, and outward, till a long-extended series reaches in some directions even to five hundred successive objects. Then sweep round with this immense

line as a radius. All the vast limits in the entire circuit of its range are filled with suns and systems that burn, and roll, and shine, as do our own.

Having gone thus far, it would seem that we are on the uttermost limits of space; and that the human mind, after attaining to that point, must there rest its weary wings. Not so. We are barely at the outskirts of one little island of the universe—a small compass, condensed and united so that if we were even in the extreme limits which we can reach with our aided vision, we should grasp the whole—all its suns and systems, as it were, in our very hand itself. When we have reached these outer limits, and applied the powers of the telescope, exploring space beyond, we find objects coming up from the deep distance and bursting upon the sight, which fill the mind with wonder and astonishment.

I have gazed through the mighty telescope upon these sublime objects in the dead hour of the night, when earth's thousands of beating, throbbing hearts were quieted in slumber—when the rapid furious pulse of business was stilled in the arms of sleep. There was a time when my own mind could not take in these objects: it seemed impossible: I could not stretch my imagination to their utmost limits. But now put your eye to this instrument, and tell me what breaks in upon your vision? Ah! I see a most beautiful sight—millions of diamond points sprinkling the blue vault of the heavens. How strange is that other object! Shall I tell you what object it is? Go with me through the regions of space—onward—onward. I see it expanding, increasing—I see diamond points in it lighting up with brilliancy and splendor. As we near the object we find it expanding till it fills the whole visible universe itself, for it is nothing less than a universe of stars. Where are we now? Look backward, and what is behind? Is our own sun visible in the mighty galaxy? Yes. I see nothing but a dim stain—a nebulous haze. Yet that is the mighty system we have left behind. This is but one, and it is the nearest of all of them. Go off in another direction and you will bring up not only tens and hundreds, but thousands of these bright and beautiful star-islands of the universe, strewn throughout the vast regions of space.

It is the business of the astronomer to study not only his own system, but to contemplate the millions of stars, and to go still farther out to those mysterious nebulous objects with which the heavens are filled, and tell if, in the long lapse of ages, some mighty change may not be working in these curious and wonderful objects.



The Dead Sea.

THE DEAD SEA.

THE result of the exploration of this ancient locality, by the United States navy officers who have just sailed for the Mediterranean, will be looked for with deep interest by the civilized world. The federal government have authorized this reconnaissance for the purpose of solving geographical problems and to elucidate ancient story.

The Dead sea is to be explored by American sailors—that sea of marvels which, after engulfing the guilty “cities of the plain”—has been ever since invested, to the imagination, with awful and supernatural character. “A pestilential vapor, it has been said, rises continually from its waters; fish can not live in, nor birds fly over them; iron will not sink in them, nor have they ever been navigated by ship or bark.”

Such slight examination as occasional travellers of more recent days have given to this bitter sea, has dispelled many of these fables; but still these deep dark waters are a mystery to the world. They have been found to contain—as accounting for their extraordinary specific gravity, which led to the tale that iron would not sink in them—41 parts in a hundred of salt; a much greater proportion than that of the sea, and derived from entire rocks of this mineral continually dissolving on the southern shore. Bitumen also rises in abundance from the bottom and floats on the surface—and hence these waters acquire a consistency which enables them to bear up bodies that would sink in other waters.

The Rev. Doctor Durbin, late president of Dickinson College, Carlisle, Pennsylvania, gives the following illustration of the density of these waters:—

“I waded in carefully, to test the oft-repeated statements of the great specific gravity of the fluid, and repeated the experiment several times: the uniform result was, that when the waters rose above my armpits but not over my shoulders, my body was balanced, and I could not touch the bottom, but my feet tended strongly to rise and my head to descend. When I turned on my back and drew up my knees, so as to balance the body on the surface, I lay as still as a knot of wood, my head, knees, and half of my feet out of the water; and so long as I was perfectly still, I floated in this position. These experiments satisfied me of its great specific gravity.”

Doctor Durbin adds that his hair was matted with the bitumen, which, on being pressed by the fingers, covered them with a sticky substance.

Josephus, in his fourth book of the wars of the Jews, relates that the waters of the Dead sea support on the surface whatever is thrown into the lake, and confirms the relation by the fact that Vespasian, to convince himself of the truth of this assertion, ordered several persons with their hands and legs tied, to be thrown into the lake, and that not one of them sunk.

But it is less to verify or refute problems such as these that an exploration of the Dead sea by competent and scientific observers is desired, than to ascertain its actual relation to

the waters of the Mediterranean, from which it is distant not more than between 30 and 40 miles; yet the level of the Dead sea is said to be some hundreds of feet below that of the Mediterranean.

Into the Dead sea the river Jordan discharges and loses itself. Descending from the sea of Tiberius, which is in fact a shallow outspreading in the fashion of a lake, of the river—some 60 miles in a winding course, the Jordan disappears in this deep and bitter asphaltic sea, which is about 24 miles in length from north to south, and not more, according to modern travellers, than six or seven in breadth.

It is comparatively shallow at its southern extremity, but its general depth is reputed to be unfathomable. Its western shore, on the side of Arabia, or Moab, is one prodigious black perpendicular wall, in which there is not a summit or the smallest peak; its eastern or Indian shore is of limestone and sandy cliffs of varied and fantastic forms.

All, however, but the mere external appearances of this dismal sea and its dreary shores, is matter of conjecture and uncertainty; and hence the greater stimulus to investigation.

The United States store ship Supply, being bound to the Mediterranean with stores, is to be employed under Lieut. Lynch, as her commander, with Lieut. Dale, who will be more specially charged with the scientific reconnoissances.

To effect the exploration of the Dead sea, they will land at Acre, and thence direct their operations across the ancient plains of Jericho, and the point of research, carefully levelling the intermediate route, in order to determine, first of all the relative altitude between the two seas. Amply provided with instruments—having metal boats of light construction, and all the means and appliances for surveying and sounding—we may justly anticipate from this expedition accurate information on points heretofore wholly conjectural, yet invested with deep interest.

It is one of the peculiarities of the water of the Dead sea, that, although so dense and bituminous, it is exceedingly translucent.

It is somewhat singular that a government of the new world should be the first to explore and verify the facts, concerning a region so intimately connected with the common faith of Christendom and the witness of one of the most awful penalties of transgression under the Mosaic dispensation; and we can not but hope from this expedition what will gratify natural and intelligent curiosity, while confirming the original record of the Bible. The evil propensities of the wandering hordes who traverse the deserts in that vicinity furnish the greatest obstacles to complete success.

BOOKS:

THEIR PUBLICATION AND CIRCULATION.

It is a very common thing to hear of the evils of pernicious reading, of how it enervates the mind, or how it depraves the principles. The complaints are doubtless just. These books could not be read, and these evils would be spared the world, if one did not write, and another did not print, and another did not sell, and another did not circulate them. Are those, then, without whose agency the mischief could not ensue, to be held innocent in affording this agency? Yet, loudly as we complain of the evil, and carefully as we warn our children to avoid it, how seldom do we hear public reprobation of the writers! As to printers, and booksellers, and library-keepers, we scarcely hear their offences mentioned at all. We speak not of those abandoned publications which all respectable men condemn, but of those which, pernicious as they are confessed to be, furnish reading-rooms and libraries, and are habitually sold in almost every bookseller's store. He that lends a man money to use for an improper purpose, or a weapon for his revenge, makes himself a partner of his crime. He, too, who writes or sells a book which will, in all probability, injure the reader, is accessory to the mischief which may be done: with this aggravation, that while the money would probably do mischief but to one or two persons, the book may injure a hundred or a thousand. Of the writers of injurious books we need say no more. If the inferior agents are censurable, the primary agent must be more censurable. A printer or a bookseller should, however, reflect, that to be not so bad as another is a very different thing from being innocent. When we see that the owner of a press will print any work that is offered to him, with no other concern about its tendency than whether it will subject him to penalties from the law, we surely must perceive that he exercises but a very imperfect virtue. Is it obligatory upon us not to promote ill principles in other men? He does not fulfil the obligation. Is it obligatory upon us to promote rectitude by unimpeachable example? He does not exhibit that example. If it were right for my neighbor to furnish me with the means of moral injury, it would not be wrong for me to accept and to employ them.

Let us stand in a bookseller's store, and observe his customers successively coming in. One orders a lexicon, and one a work of scurrilous infidelity; one Captain Cook's voyages, and one a new licentious romance. If the bookseller takes and executes all these orders with the same willingness, we can not but

mon thing to hear of the reading, of how it enervates, depraves the principles, are doubtless just. These read, and these evils would, if one did not write, and, and another did not sell, not circulate them. Are not whose agency the mis- issue, to be held innocent in ey? Yet, loudly as we vil, and carefully as we o avoid it, how seldom do probation of the writers! bookellers, and library- ly hear their offences men- speak not of those aban- which all respectable men hose which, pernicious as to be, furnish reading- and are habitually sold in kseller's store. He that y to use for an improper on for his revenge, makes of his crime. He, too, a book which will, in all the reader, is accessory to a may be done: with this while the money would ief but to one or two per- y injure a hundred or a writers of injurious books ore. If the inferior agents e primary agent must be A printer or a bookseller effect, that to be not so bad y different thing from being we see that the owner of a y work that is offered to concern about its tendency ill subject him to penalties surely must perceive that very imperfect virtue. Is us not to promote ill! princi- ? He does not fulfil the obligatory upon us to pro- unimpeachable example? it that example. If it were bor to furnish me with the ury, it would not be wrong and to employ them. n a bookseller's store, and ers successively coming in. on, and one a work of scur- Captain Cook's voyages, centious romance. If the and executes all these orders illingness, we can not but

perceive that there is an inconsistency, an incompleteness, in his moral principles of action. Perhaps this person is so conscious of the mischievous effects of such books, that he would not allow them in the hands of his children, nor suffer them to be seen on his parlor-table. But if he thus knows the evils which they inflict, can it be right for him to be the agent in diffusing them? Such a person does not exhibit that consistency, that completeness of virtuous conduct, without which the Christian character can not be fully exhibited. Step into the store of this bookseller's neighbor, a druggist, and there, if a person asks for some arsenic, the apothecary begins to be anxious. He considers whether it is probable the buyer wants it for a proper purpose. If he does sell it, he cautions the buyer to keep it where others can not have access to it; and before he delivers the packet legibly inscribes upon it—Poison. One of these men sells poison to the body, and the other poison to the mind. If the anxiety and caution of the druggist are right, the indifference of the bookseller must be wrong. Add to which, that the druggist would not sell arsenic at all if it were not sometimes useful; but to what readers can a vicious book be useful?

Suppose for a moment that no printer would commit such a book to his press, and that no bookseller would sell it, the consequence would be that nine tenths of these manuscripts would be thrown into the fire, or rather that they would never have been written. The inference is obvious; and surely it is not needful again to enforce the consideration that although your refusal might not prevent vicious books from being published, you are not therefore exempted from the obligation to refuse. A man must do his duty, whether the effects of his fidelity be such as he would desire or not. Such purity of conduct might no doubt circumscribe a man's business, and so does purity of conduct in some other professions; but if this be a sufficient excuse for assisting to demoralize the world, if profit be a justification of a departure from rectitude, it will be easy to defend the business of a pickpocket.

We know that the principles of conduct which these remarks recommend lead to grave practical consequences: we know that they lead to the conclusion that the business of a printer or bookseller, as it is ordinarily conducted, is not consistent with Christian uprightness. A man may carry on a business in select works; and this, by some conscientious persons, is really done. In the present state of the press, the difficulty of obtaining a considerable business as a bookseller without circulating injurious works may frequently be great, and it is in consequence of this diffi-

culty that we see so few booksellers among the quakers. The few who do conduct the business generally reside in large towns, where the demand for all books is so great that a person can procure a competent income though he excludes the bad.

He who is more studious to justify his conduct than to act aright may say that if a person may sell no book that can injure another, he can scarcely sell any book. The answer is, that although there must be some difficulty in discrimination, though a bookseller can not always inform himself what the precise tendency of a book is—yet there can be no difficulty in judging, respecting numberless books, that their tendency is bad. If we can not define the precise distinction between the good and the evil, we can nevertheless perceive the evil when it has attained to a certain extent. He who can not distinguish day from twilight can distinguish it from night.

The case of the proprietors of common circulating libraries is yet more palpable; because the majority of the books which they contain inflict injury upon their readers. How it happens that persons of respectable character, and who join with others in lamenting the frivolity, and worse than frivolity, of the age, nevertheless daily and hourly contribute to the mischief, without any apparent consciousness of inconsistency, it is difficult to explain. A person establishes, perhaps, one of these libraries for the first time in a country town. He supplies the younger and less busy part of its inhabitants with a source of moral injury from which hitherto they had been exempt. The girl who till now possessed sober views of life, he teaches to dream of the extravagances of love; he familiarizes her ideas with intrigue and licentiousness; destroys her disposition for rational pursuits; and prepares her, it may be, for a victim of debauchery. These evils, or such as these, he inflicts, not upon one or two, but upon as many as he can; and yet this person lays his head upon his pillow, as if, in all this, he was not offending against virtue or against man!

THE BIBLE.—There is no other volume in the world which grows in interest by repeated reading. We may study Bacon, Butler, or Boyle, but so soon as the argument is appreciated and the truth appropriated, the mind labors through another reading. But every passage in the New Testament is fruitful of varied suggestions, and the more spiritual the mind of the reader, the more fruitful of good is the passage read. Because one passage suggests others, and thus, like the links of a chain, attains some new or some impressive views of God's character and of human duty.

BO-PEEP.

Our engraving represents one of those scenes in domestic life which cost us little, but go so far to make up the sum of a woman's happiness. The picturesque arrangement of light and shade is the most striking artistic feature of the group. As the "free knitter in the sun" swiftly interlaces the glistening pins, like lines of light, her thoughts as speedily weave mingled dreams of the future, as the childish glee of the children comes to her ear. On one side the low sun shoots his beams over sweet gardens and fresh fields, and at last rests upon the green grape clusters, peeping between the leaves around the cottage-door, and upon her clean olive cheek, transparent as the lucid skin of the berry. On the one hand it is the glow of outward nature that warms her heart; on the other, the joy of maternal love, as she watches her children at play.

CURIOSITIES OF SCIENCE.

The following interesting facts are from an address delivered by Professor Mapes, before the Mechanics' Institute of New York:—

The feathers of birds, and each particular part of them, are arranged at such an angle as to be most efficient in assisting flight. The human eye has a mirror on which objects are reflected, and a nerve by which these reflections are conveyed to the brain, and thus we are enabled to take an interest in the objects which pass before the eye. Now, when the eye is too convex, we use one kind of glasses to correct the fault, and if it be not convex enough, or if we wish to look at objects at different distances, we use glasses of entirely another description.

But as birds can not get spectacles, Providence has given them a method of supplying the deficiency. They have the power of contracting the eye, of making it more convex, so as to see the specks which float in the atmosphere, and catch them for food; and also of flattening the eye, to see a great distance, and observe whenever any vulture or other enemy is threatening to destroy them. In addition to this they have a film, or coating, which can be suddenly thrown down over the eye to protect it; because at the velocity with which they fly, and with the delicate texture of their eye, the least speck of dust would act upon it as a penknife thrust into the human eye. This film is to protect the eye, and the same thing exists to some extent in the eye of the horse. The horse has a very

large eye, very liable to take dust. This coating in the horse's eye is called the haw, or third eyelid, and if you will watch closely, you may see it descend and return with electric velocity. It clears away the dust, and protects the eye from injury. If the eye should catch cold, the haw hardens and projects, and ignorant persons cut it off, and thus destroy this safeguard.

You all know, if you take a piece of iron and make of it a hollow rod a foot long, what weight it will support; a weight many times greater than before. Nature seems to have taken advantage of this also, long before mathematicians had discovered it, and all the bones of animals are hollow. The bones of birds are large, because they must be strong to move their large wings with sufficient velocity; but they must also be light, in order to float easily upon the air. Bird also illustrates another fact in natural philosophy. If you take a bag, make it air-tight, and put it under water, it will support a large weight, say a hundred pounds. But twist it, or diminish the air in it, and it will support no such weight. Now, a bird has such an air-bag. When he wishes to descend, he compresses it at will, and falls rapidly; when he would rise, he increases it, and floats with ease. He also has the power of forcing air into the hollow parts of the body, and thus to assist his flight. The same thing may be observed in fishes. They also have an air-bag to enable them to rise or sink in the water, till they find their temperature.

If they wish to rise, they increase it; if they wish to sink they compress it, and down they go. Sometimes the fish, in sinking, makes too strong an effort to compress it; then down he goes to the bottom, and there remains for the rest of his life. Flounders, and some other fish, have no air-bag; and so they are never found floating on the surface, but must always be caught at the bottom.

In this way are the principles of science applied to almost everything. You wish to know how to pack the greatest amount of bulk in the smallest space. The form of cylinders leaves large spaces between them. Mathematicians labored hard for a long time to find what figure could be used so as to lose no speck; and at last found that it was the six-sided figure, and also that a three-plane ending in a point, formed the strongest roof or door. The honey-bee discovered the same things a good while ago. The honey-comb is made up of six-sided figures, and the roof is built with three-plane surfaces coming to a point.

If a flexible vessel be emptied of air, its sides will be almost crushed together by the pressure of the surrounding atmosphere. And

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Bo-Peep.

if a tube partly filled with fluid be emptied of air, the fluid will rise to the top. The bee understands this, and when he comes to the cup of the tall honey-suckle, and finds that he can not reach the sweets at its bottom, he thrusts in his body, shuts up the flower, and then exhausts the air, and so possesses himself of the dust and honey of the flower. The feet of flies and lizards are constructed on a similar principle, and they thus walk with ease on glass or ceiling. Their feet are so made as to create a vacuum beneath them, and so they have the pressure of the atmosphere, fifteen pounds to the square inch, to enable them to hold on. The cat has the same power to a less extent.

Plants require the sunlight, and some flowers turn themselves toward the sun, as it travels round from east to west. The sunflower does this, and so does a field of clover. The facts, though we have not yet got at the reason of them, are still extremely interesting.

The Virginia creeper throws out tendrils in the form of a foot with five toes; each toe has a large number of hairs or spines, which entering the small opening of brick or lime, swell and hold on; but when decaying they shrink and the plant falls off. The vanilla plant of the West Indies exhibits a similar construction, except that it winds itself around other objects.

WHITEFIELD AND WESLEY.

WHITEFIELD and Wesley accomplished great moral effects by their persuasive eloquence. England had rarely, if ever, been in a lower moral and spiritual condition than it was in the early part of the last century. The fanaticism of several religious sects during the period of the Cromwellian commonwealth, was followed by the wide-spread libertinism which had gone out everywhere from the court of Charles II. To this, there was but little check. For the clergy of that period, appointed to their livings chiefly by secular, if not bad men, for the most part resembled, in character, those who gave them their livings. In this state of things, six or eight young men, students at Oxford, became truly pious; and being more sober than their fellow collegians, and more zealous Godward, they were treated with great derision by their equals, and with marked contempt and reproach by their officials.

Their persecution, however, did them good. It increased their zeal. It gave firmness to their faith, and resoluteness to their purpose

Although Whitefield and Wesley received orders, yet as they were shut out from the pulpits of most of the established churches, they went everywhere, preaching the word. In fields—on wide moors—and sometimes in the outskirts of large cities—these men of God, with a freedom, a manliness, and pathos of utterance, almost pentecostal, warned sinners to flee from the wrath to come, and made known the exceeding riches of the grace of God in Christ Jesus. The effect on multitudes was electrical. More and better than this; it was enlightening, sanctifying—saving. The lower classes received an intellectual impulse and elevation of character, such as they never before experienced. They were trained to think and inquire; and were lifted up to the knowledge of the true God, and of Jesus Christ, whom he had sent. The drunkard left his cups; the licentious his haunts; and the profane ceased his oaths. Many, who had been like the Corinthians, were, like them, “washed, and sanctified, and justified, in the name of the Lord Jesus, and by the Spirit of our God.”

“Lions and beasts of savage name,
Put on the nature of the Lamb.”

The eloquence of George Whitefield and of John Wesley was of a very different character each from the other. But each was suited to win attention, to secure confidence, and to accomplish the grand purposes of preaching—by rescuing men from the paths of sin, and restoring them to the obedience of the truth.

Whitefield, overflowing with the strong and tender sensibilities of his nature, exhibited his whole soul in his features and in every movement of his body. His very tones, even without words, assisted by his countenance, would touch the chords of fear, and terror, and hope, and sensibility, in the vast crowds that always assembled to hear him. And when these tones conveyed the awakening, peace-giving, and hope-inspiring truths of the gospel, with God's blessing they produced their appropriate effects.

Wesley was an eloquent man, but of a very different order. His undoubted piety, his purity, his abstemiousness, and his observance of clerical propriety in his costume and deportment, inspired his hearers with confidence and reverence. No one heard from him the bursts of eloquence which distinguished Whitefield's preaching. There were no sudden thunderings and lightnings from Mount Sinai, taking his hearers by surprise, and making them quake with fear and terror. But there was an even, a gentle flow of truth, like a clear and refreshing, but almost noiseless stream—varied with facts and narratives

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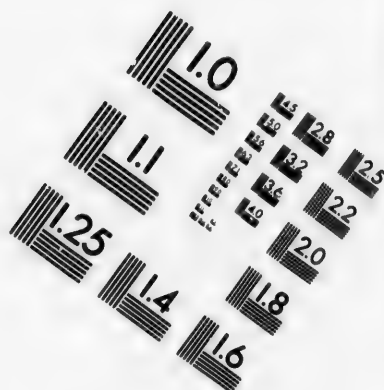
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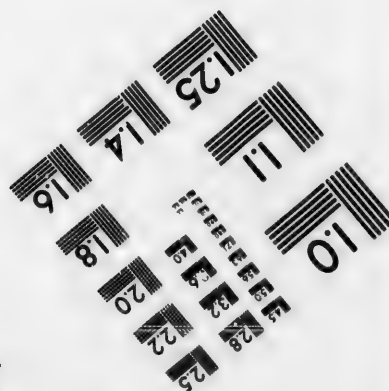
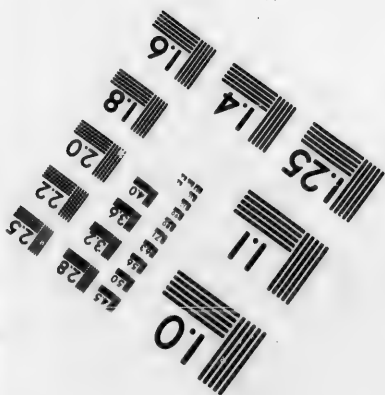
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suited to fix attention, and to illustrate the subjects of his discourse. His hearers were overawed and yet captivated by the sanctity of his appearance as though he were a gentle and yet authoritative visitor from another world, whose messages, though calmly and mellifluously uttered, were not to be doubted.

The eloquence of Whitefield was like the drops of rain coming down copiously and with audible noise. The eloquence of Wesley was like the falling of the dew upon the tender herb, known more by its effects than by its fall. And then, if Wesley was inferior in direct power of speech to Whitefield, he was far superior as to the power of his pen. With the latter instrument, Whitefield could do nothing. His whole strength was in his oratory. But while he was unsurpassed in the pulpit, Wesley far transcended him in ecclesiastical government. One was a child as to his capacity to organize into a well-arranged religious body, the converts he had made. The other was a giant, or rather an able statesman, in reducing his converts to fellowship and durable organization. Hence, perhaps, there is scarcely a church in Christendom that can trace its origin to Whitefield; but there are a thousand churches in Europe and America that delight to trace their existence to Wesley. We need not add that both these men were great blessings to the world, and the more so, that they were laboring and preaching in the same districts of country, in alternate succession, or at the same time. As neither the sun nor the moon can take each other's place, so it was with these men of God. Each had his appropriate messages to deliver, and his own manner of delivery, and his own special work to perform. Infinite Wisdom knew this, and wrought, now by the son of thunder—and now by the son of consolation. Their eloquent advocacy of the great truths of the gospel, became the power of God unto salvation, to multitudes who, through their word, believed. Their oratory, under God, was full of benignity and good to their fellow-beings, both in Great Britain and her then American colonies.

WINDOW GARDENING.

In crowded cities, where ground is so valuable that large houses have only a small yard behind them, window gardening becomes an important branch of floriculture, as it affords the inhabitants almost their only chance of enjoying the luxury of flowers. That the cultivation of flowers, even in a window, is, indeed, an enjoyment to the inhabitants of

cities, is evident by the pleasure with which we see many of those who live by their labors with the needle or the loom, spending the greater part of their few leisure hours in tending a few geraniums or other flowering plants arranged on a window sill; and there is something affecting in the sight, when we recollect that many of these persons probably came originally from the country, and that these few leaves and flowers are all that remain to remind them of their native fields. The plants of persons of this class are, however, generally much more healthy than those of richer cultivators, probably because they are more cared for, and more diligently watched; for no living objects more amply repay the attention bestowed upon them than flowering plants.

All plants grown in pots, and kept in a room, require more attention than they would do in any other situation, as they are in a most unnatural state, and they need the greatest care that can be bestowed upon them to counteract the bad effects of their peculiar position. To understand thoroughly how disadvantageous that position is to their growth, we must recollect that plants derive their nourishment partly through their roots, and partly through their leaves, by means of pores so extremely fine, that they can only be seen by the aid of a very powerful microscope. When a plant is kept constantly in an inhabited room, the pores of the leaves become choked up with dust; and as the air of every room inhabited by human beings must necessarily be very dry, the delicate points of the roots, which are of a soft spongy nature, to enable them to imbibe water, become withered or dried up, and lose that power of alternate dilation and contraction, which is absolutely necessary to enable them first to absorb moisture from the soil, and afterward to force it up through the stem and leaves. In addition to these evils, which it is extremely difficult to guard against, may be added another of almost equal importance, arising from the use of saucers to the flower-pots. These it is difficult to dispense with in a living room, as, without them, there would be danger of injuring the carpet, and other articles of furniture, every time the plant is watered; for water is of scarcely any use, unless it be given in sufficient quantity to saturate the whole mass of earth in the pot, and this can not be done without some escaping by the hole at the bottom. If, however, water be suffered to stand in the saucer, unless there be abundance of drainage in the bottom of the pot, the water will sadden the earth, and if it does, the spongioles of the roots will inevitably become rotten. Wherever, therefore, plants are kept in pots, it should be a paramount object with the cultivator to set

them out in the open air as often as possible, and then, while the pots are standing without their saucers, to give them abundance of water, either syringing their leaves, or washing them thoroughly by holding a watering-pot, with a fine rose, above them, and letting the water descend on their leaves like a shower. In summer, plants may be watered in this manner twice a day, and in spring and autumn once a day, without receiving the slightest injury from over-watering. In winter, however, the case is different; and as soon as the air becomes frosty, the plants should not be exposed to it, and they should be watered as little as possible, so as to keep them alive, unless they should be plants which flower in the winter, in which case they should be watered daily, as all plants when in flower require more water than at any other season. As these winter-flowering plants must, of course, be placed in saucers, for the sake of cleanliness, it will be necessary to take care, when the plants are watered, that the saucers are emptied out, as soon as the water has run through into them, so that no stagnant water may be allowed to remain to chill the roots. Another point which should be attended to, when plants are kept in living rooms, is to remove all the dead leaves as soon as they appear, as the decomposition of vegetable matter is extremely injurious to the health of human beings. Even the plants themselves appear to grow better when all the decaying vegetable matter they produce is regularly removed from them; and not only do they grow more vigorously, but the perfume and beauty of their flowers is said to be increased.

In attending to the cultivation of plants which are to be kept in rooms, it must never be forgotten that they require air as well as water to nourish them. It has been long known that plants will not thrive unless the air has free access to their leaves; but it has only lately been ascertained that the leaves not only act in elaborating the sap, but that they also take in nourishment from the atmosphere. Air should likewise be permitted to have access to the roots moderately, so as not to dry them; as the roots can derive nourishment from it, as well as the leaves, provided they are kept in a sufficiently moist state by the earth with which they are surrounded, to be capable of taking nourishment from anything. The important fact that plants derive a great portion of their nourishment from the atmospheric air, was little known before the time of Liebig; and even now, it is so contrary to all our ancient prejudices, that even where it is acknowledged, it is rarely remembered when the rules derived from it are to be acted upon.

Light is as essential as air or water to the

growth of plants; and as plants in pots rarely obtain a sufficient quantity when they are kept in living rooms, their stems are frequently drawn up till they become weak and slender, and neither their leaves nor their flowers are so dark as they would be if the plants were grown in the open air. When plants are grown in greenhouses, they are generally placed upon a stage raised on steps one above another, and in this manner the leaves receive the full advantage of light, while the sides of the pots are not dried by exposure to the sun; but the reverse of this generally takes place when plants are kept on a window-sill, as the leaves of the plants are frequently shaded by some projecting part of the house or window; while the pots are exposed to the full influence of the sun, and thus the points of the roots of the plants contained in them are very apt to become dry and withered.

It may possibly be thought by some persons, that it is scarcely necessary to enlarge on the importance of light, air, and water, to the health of plants, as every one must be aware of that fact; this, however, is far from being the case. The generality of amateurs who cultivate plants in pots, think that the principal care requisite for their plants is to keep them warm; and if they do not grow freely, to give them manure; but nothing can be more erroneous than this mode of treatment. Too much heat is as injurious as too much cold; and if plants are brought suddenly out of a cool greenhouse into a very warm room, they will become sickly; their flower-buds will fall off without expanding, and probably they will lose the greater part of their leaves.

Over-manuring is still more injurious. The roots of plants in pots are so cramped by the confined space in which they are kept, that they have seldom strength to digest strong manure; and there is no doubt that great numbers of greenhouse plants were killed by overdoses of guano, when it was first introduced. Giving strong manure to a sickly plant is as injurious as giving strong food to an invalid; and in both cases, does harm rather than good. If to over-manuring be added abundant watering, and want of drainage, the earth in the pot becomes what is called sour, and is not only totally incapable of affording nourishment, but it actually rots the roots of the plants growing in it.

EXCELLENCE is never granted to man, but as the reward of labor. It argues, indeed, no small strength of mind to persevere in the habits of industry without the pleasure of perceiving those advantages, which, like the hand of a clock, while they make hourly approaches to their point, yet proceed so slowly as to escape observation.

THE BOUNTIES OF NATURE.

INNUMERABLE are man's relations with the outer world. Think not merely of the links which bind to it your animal life. True, our life depends every moment on the air in the midst of which we live. But we bear other relations to the visible world. The skies are yours, for you behold them with wonder and delight. The variegated earth is yours, and the rich uplands of the swelling hills: the music of the rustling trees and of the rippling brook; the changeful anthem of the ocean is yours; for things properly belong to those who can enjoy them, and the man of a cultivated mind has inlets of pleasure for every department and almost every object in the world. How rapidly increase our relations with the universe in proportion as we gain knowledge and become refined in taste. The infant sees in life nothing but smiling eyes and happy faces; and pleasurable is the sight. The boy views every object in relation to his amusement. The ignorant ascend not beyond the associations connected with animal gratifications. Hills to the shepherd are made for grazing sheep. Rivers in the eyes of the commercial man are means of inland navigation, and the ocean rises to no higher character than the great highway of nations. How different the views of him whose mind is well-disciplined and well-filled; whose heart is pure and lofty; how dissimilar his views, and how much more true, varied, rich, and elevated. There can not be a greater mistake than to suppose that the obvious are the sole qualities of bodies—the lower are the only real relations that exist between them and us. If it is found that these relations multiply with every step man takes in advance, then may we infer that there is much more yet to be known—many links to discover—other spheres of beauty, of use, of gratification.

Indeed, we are as yet only in the alphabet of our knowledge of nature: we stand only on the threshold of her temple. Not on the most tiny and inconsiderable object can we look, but wonder mingles with our pleasure: the little that we know of it tells us there are greater secrets to be explored; a richer mine in nature to be discovered and worked. That leaf pleases by its contour, and gratifies by its texture and its hue: place it under the microscope, how eclipsed is its superficial beauty. That rivulet has caught your eye, you listen pleasurably to its soothing melody: then mark how the daisy and the buttercup enamel its banks; how the mild violet peeps smilingly up from under its tangled shrubs; but carry forward your thoughts; see how a thousand streamlets trickling down from their gravelly beds unite to form a rivulet; and a hundred

rivulets running over richly-covered plains meet together in a stream; and how several streams, after watering and refreshing many a homestead and many a village, flow into a river: how after having left their benefactions behind for men and cattle, rivers unite, and in one grand volume go like a monarch, forward to the ocean, there to blend with other streams from opposite quarters of the globe, and form the great reservoir of waters which binds together remote nations, supplies the clouds with moisture, makes our atmosphere fit for sustaining animal life, and sends dews and showers to enrich the earth and feed every living thing.

It is chiefly when the moral and the religious feelings intervene, that man's relations to the world become most impressive and most gratifying. Abundance and privation seen as God's ordinations for man's good—instruct while they move and fill the mind with sentiments of the holiest kind. How great, how ennobling, is the contemplation of the universe, when all is seen in God; and God is seen in all.

Then is there excited in the mind a feeling which, more than any other, combines what is pleasurable with what is elevating; namely, gratitude. This is the emotion which an abundant harvest spontaneously awakens. In every plain, on every hillside, along the winding banks of every stream, we behold gifts of the divine bounty, trace our relations with inanimate nature, and hear claims on our grateful adoration. The birds and the cattle, in partaking of these provisions, and uttering the glad tones which abundance prompts, join in inviting man to praise the common benefactor. The joy excited by the bright promise of an ample harvest is enhanced when we revert to the privations and sufferings that in times of scarcity thousands have to endure. The time will come when there will no longer be the possibility of a widely-extended famine. Dearth of food does by no means depend exclusively on the abundance of one harvest, or the ample returns reaped by the agriculture of one country. Moral causes here, as in every human interest, have very much to do with our condition. In the earliest periods of history, famine frequently devastated large portions of the earth. Yet the population was thin and scattered, land was not wanting, harvests in general were copious. Dearth of food arose from men's improvidence. They lived for the passing hour. Plenteous and unlimited in her gifts is our mother earth. But if men will not ask her for more than they at the moment need; or, if they squander what they have; or, if they will not take and enjoy in one part what she produces in another—what but famine and distress can be

expected? We are very far from having reached the limit of the earth's productiveness. How large a portion of its surface is yet uncultivated! how imperfect much of our actual cultivation! In science, the progress of society has been most rapid and most extensive. Have its resources no new power to unfold, in regard to the production of food for man? Amid its multitudinous combinations, is there not one which will directly minister to the support of human life? We can send our words with the rapidity of lightning over the earth's surface. We dart through the air more swiftly than the birds. Shall we despair of yet discovering means for multiplying the supplies of human food? Such a secret will, we doubt not, be discovered.

But were it actually in our possession, and were we in consequence able to increase the common stock a hundred-fold, still should we possess no absolute guaranty against want and dearth. The lands that are most prolific are not the most free from famine. It is not abundance so much as thrift that secures man from indigence. Those who have most at their command are generally most in need. The rich man's estate comes to the hammer, while the cottage of the industrious laborer passes down through successive generations. Where nature or providence is most bountiful man is most wasteful. The barbarian consumes as fast as he gains. What is termed civilized society bears some resemblance to savage life. Hitherto, each country has first kept its own produce to itself, then refused to receive the produce of other lands, and lastly, consumed every year what the year has brought forth. It is partly to the folly of governments, partly to the improvidence of individuals, that we owe dearth, famine, and pestilence. When we think of the amazing command over external nature that man has gained, and think also of the resources of moral wisdom, we feel no less amazed than grieved that such a calamity as the late dearth in Ireland is possible. Three millions of men, women, and children, in the nineteenth century reduced for their daily subsistence to the dole of charity! and in a most prolific land, with abundance on foreign shores waiting to be purchased and consumed! An entire people living from hand to mouth! the British islands with no provision against the day of need! their barns empty, their storehouses exhausted! and that too, when thousands and tens of thousands of hands were ready and willing to labor in producing or sending them food!

The true wealth of a people is what they save from the present. Men must save if they would be safe. Accumulation renders want impossible. Accumulation promotes accumulation. Every individual ought to lay

by for the future a portion of his present gains. These exertions of our moral nature must become, and they only can become, the guardians of our physical life. He is not poor, he never will be poor, who consumes less than he obtains. Where there is a spare loaf, famine never comes. Individual thrift is national prosperity. Abundance vanishes before wastefulness. An impoverished must be a suffering people. Whether, in general, the relation which the outer world bears to us individually and collectively shall be one of happiness or of suffering, depends mainly on our character. Mental culture, wise forethought, generous affections, a healthy frame—these are the great sources of happiness; and were these universal, pain would be rare, and famine unknown.

VIADUCT OVER THE PATUXENT.

THE arches of the viaduct, in the engraving which we present to our readers, span the Patuxent, a stream which at some points is of very considerable depth and breadth, but which, in addition to its own loveliness becomes an object of interest for its being the scene of actions which transpired during our country's last war with Great Britain. The view will be recognised for its faithfulness in every particular; and, that it may be more forcibly impressed upon the memory, we annex some of the historical passages connected with it, drawn from the most respected authorities.

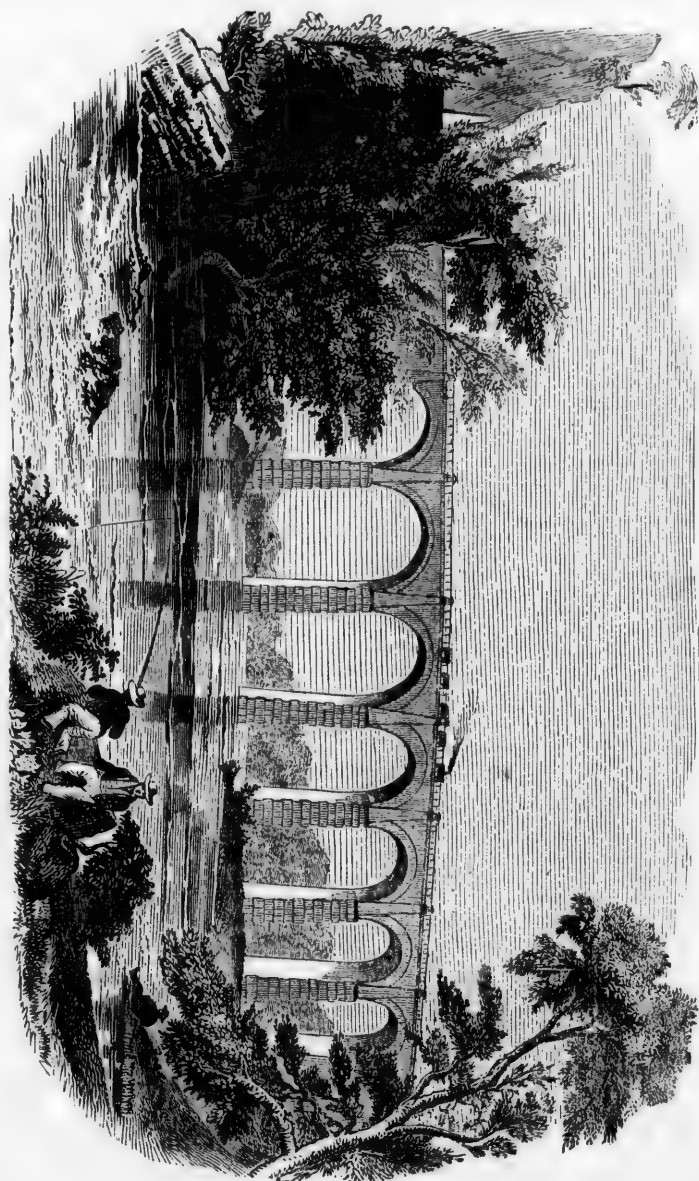
In May, 1814, while the British were attempting to blockade the coast, in the command of a flotilla, comprising a cutter, two gun-boats, a galley, and nine large barges, Commodore Barney sailed from Baltimore for the protection of the bay. At the mouth of the Patuxent, on the first of June, he discovered and chased two schooners, one of which carried eighteen guns. The schooners were soon joined by a seventy-four-gun ship, which sent a number of barges to their assistance, and the commodore, to avoid being cut off from the Potomac, sailed up the Patuxent. The schooners and barges having followed him, he engaged and drove them back, and anchored within three miles of the seventy-four. After a few days, the British were reinforced by a sloop-of-war and a razee, and joining the barges, they moved into St. Leonard's creek, where Commodore Barney had placed the flotilla across in line of battle. An engagement was the consequence. The enemy retreated, the flotilla followed, and in the afternoon the former made a second attack with twenty

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Viaduct over the Patuxent, on the Baltimore and Washington Railroad.



barges and two schooners. The action was severe, and the eighteen gun schooner was run aground and abandoned. A corps of artillery arriving from Washington on the twenty-sixth, the commodore attacked the whole squadron, and after an action of two hours, drove the enemy's ships down the river.

The British government, hostilities in Europe having ceased, sent out reinforcements to their fleet in America. Sir Alexander Cochrane arrived with thirty sail, and several thousand men, under Major-General Ross. This power entered the Chesapeake, and a plan of attack was formed against Washington, Alexandria, and Baltimore, the secretary of state having been honorably informed by the admiral, that his orders were to lay waste all the accessible towns on the coast. In two divisions, the fleet approached the capital by the Potomac and Patuxent.

Commodore Barney, obedient to orders, blew up the flotilla in the Patuxent, and, with his men, joined General Winder. General Ross landed six thousand men at the head of frigate navigation. He was met by General Winder, and his force of five thousand men, at Bladensburg. The action commenced at noon. In the main road by which the British advanced, was Commodore Barney's battery. After several vain attempts were made to pass him, the main column was thrown into disorder. His right was then flanked. In all other points, the British gained, and Commodore Barney, with a slight force, stood alone.

The commodore was wounded in the thigh, and had but a single round of cartridge left; General Ross had nearly the control of the field. Thus situated, the commodore reluctantly retreated, and soon fell, exhausted by the loss of blood. Taken prisoner, he was borne to the enemy's hospital, kindly treated, and on his recovery, released on his parole.

General Ross marched to the capital, and burned the public buildings, an act which was immediately condemned by the British government.

The division of the enemy's fleet which went up the Potomac, consisted of eight sail, and was commanded by Captain Gordon. It was directed to attack Alexandria. The town surrendered, and stipulated that the houses should be neither entered nor destroyed.

Captain Gordon, afterward, with a fleet of prizes taken from Alexandria, sailed to join the rest of the squadron in the Chesapeake, receiving some damage from the batteries near the mouth of the river as he descended, and united in the less formidable actions against Baltimore.

The following lines beautifully describe the past and present appearance of the Patuxent,

and give additional testimony in favor of the triumphs of peace and industry :—

What a change has old Time, in his course here created,
Patuxent! sweet river, since when a mere boy,
Far away from my home, with sweet Pleasure co-mated,
On thy banks we discovered the fountains of Joy.

I remember the day when the cannon's loud rattle,
Shook the bounds of thy bed like the thunder's dread
roar,

And the smoke that arose from the scene of the battle,
Spread above thee in clouds, and enshrouded thy shore.

At a distance I stood and beheld with deep wonder,
Through the far-lengthened line, as each lightning-flash
broke,

While the scene was confused by the echoing thunder,
The dead and the dying that fell in the smoke.

Oh, how peaceful and quiet is now all around thee,
Thy banks are disturbed by no din that destroys,
For twinned Commerce and Wisdom have happily found
thee,

And their zeal for mankind now thy service employs.

Thou art spanned by triumphant and useful high arches,
Which unite thy rich banks, as a clasp firm and strong,
And Enterprise there with a magic o'ermarches,
While her votaries follow, and fear not to throng.

What a change has old Time, in his course here created,
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NOAH WORCESTER,

THE AMERICAN APOSTLE OF PEACE.

NOAH WORCESTER, the subject of the following sketch, was born at Hollis, New Hampshire, on the 25th day of November, 1758. Hollis was then, like many New England towns which are now flourishing, an obscure place, and the roads which passed through it were marked by the axe of the woodman. A few years serve to clear away the trunks and roots of trees in these thriving villages, and substitute in their place neat square houses, with at least one church with its spire pointing upward. Noah was lineally descended from the Rev. William Worcester, who came from Salisbury, in England, and became minister of a church in Salisbury, in Massachusetts Bay, instituted in 1638, probably soon after his arrival from the mother-country. Noah, with the beautiful simplicity and truth that marked his character, speaks of his religious impressions as of the earliest date that he could remember anything, except, he adds, "a burn which I received in my bosom when I was two years old." His opportunities of education were few and imperfect, and his services as a laborer, as he grew strong and robust, became important; a few weeks in the winter season were all that

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could be allowed him for school education, which was of the simplest kind, and deficient in the practical studies of grammar and geography. When he was sixteen, his school education wholly ceased.

It is not surprising that, possessed of an ardent and active mind, he should have embraced the first change that offered; and on the commencement of the American Revolution, the ensuing spring, he joined the army as a fifer, and continued eleven months in the service. He was at the battle of Bunker's Hill—memorable both for British and Americans, who may to this day view the ground, enriched by the blood of their cherished sons.

His recollections of this period were vivid; once he narrowly escaped being made prisoner. He was afterward in the battle of Bennington, and expressed the acuteness of his feelings in going over the battle-ground the day after the contest. When the term of his enlistment expired, he was solicited to remain, with offers of increased emolument; but he was heart-sick of the business, and persisted in quitting the camp.

This was, in truth, the school in which Providence had destined him to be educated; it was here he was to learn the means of being most useful to his fellow-creatures; to learn the nature of war, its vampire horrors, fattening on the blood of fellow-men, and rioting on the bed of carnage. He expressed devout gratitude to Providence, who had led him unharmed through moral dangers, but he was shocked to find how greatly the generous and tender sympathies of his nature had become weakened by the sight of human carnage. There was still, however, a living spring of sympathy in his heart; he had found a being congenial to himself, with a mind gentle and courageous as his own—a young girl, who at the age of sixteen was willing to pledge her faith to him, then eighteen, and hand in hand meet poverty and war.

Another source of education was now opened to him: he was requested to become the teacher of the village school. He felt his deficiencies for such an office, but was resolute and determined to remove them. He devoted the intervals of the school—it must be remembered that this occupied only the winter months—in acquiring such learning as was most useful and necessary; and finding it difficult to procure paper during the war, he selected pieces of white birch bark, and imitated the best copies of handwriting he could find. He was fortunate enough at the age of eighteen to procure a dictionary, the first he ever possessed. That he was continued in the office of a teacher nine successive winters, is a proof how faithfully he filled it. He was married with no other prospects in life but

farming in the summer, and keeping school in the winter; yet peace and contentment made their home in his dwelling. At this time he was twenty-one years of age, and had never written any compositions on abstract subjects. He mentions writing letters for himself and others who had friends in the army, and also when teaching, composing copies for his scholars, and questions in arithmetic, instead of taking them from books. His habits of reflection and inquiry were formed, and led him to free discussions, and even arguments, on various subjects.

About this period a convention of delegates had formed a constitution for New Hampshire, his native state, which they caused to be printed and sent to the different towns, with a request that "such objections as should occur might be stated in writing, with reasons for their support, and forwarded to the convention at their next meeting."

It was now that the treasures of his mind, which had been gradually accumulating, burst forth into spontaneous fruit. He composed an article on the subject, perfectly satisfactory to the committee and the town, and began to feel that by practice he might write to advantage. He formed the habit of examining religious subjects, by writing short dissertations on different questions. He was prompted to these exercises by the quickness and activity of his mind, and for his own satisfaction. The strength of these impulses may be better comprehended by a knowledge of his situation. He had an increasing family, and no means of subsistence but the labor of his own hands. This was incessant. When not working on the farm, he applied himself to making shoes, which became in fact his recreation. The man who was to effect a revolution in public opinion in after-life, sat at work upon his bench, apparently wholly engaged with his awl and his last; but at the end of the bench lay his lapboard, with pen, ink, and paper, upon it; and when his thoughts were ripe for expression, the shoe gave place to the lapboard, and placing it on his knees, he poured forth the eloquent thoughts that demanded utterance.

We have no intention of entering into the process of Mr. Worcester's theological opinions, deeply interesting as they are, and guided and developed by the faithful study of Scripture. This has been done by the ablest of pens; and though the hand that once guided it is still and consigned to the dust, the mind that impelled it still lives, and will continue to influence thousands of human beings.*

The power of self-education is much better understood in the present day than it was at that period of Noah Worcester's life. Those

* The Rev. Henry Ware, Jan., D.D.

who had seen the stripling grow up to manhood among them, without any external advantages, yet now standing forth with a degree of moral power and dignity, were astonished; they felt that he was called to do the work of his father, and many of his clerical friends urged him to become a minister. After deep reflection, he resolved to present himself for examination, and was readily approved.

"I have never," he says, "doubted the friendship or sincerity of those ministers who advised and encouraged me to become a preacher; yet I have often doubted whether I could have given similar advice under similar circumstances. My want of education was great; I had a wife and three children who depended for support on the fruit of my labors; I was embarrassed by debt, by having purchased a farm at an unfavorable time during the war; I had found no leisure for regular study; and when or where I should obtain regular employment as a preacher seemed wholly uncertain. When in later years I have reflected on these several facts, it has seemed to me wonderful that wise men should have advised me to make the attempt to become a minister, and also wonderful that I was induced to comply with their advice. But, doubtless, God had some wise design in so ordering the event."

His preaching was immediately acceptable, and in a few months he was settled at Thornton; "and here," says his biographer, "he fulfilled a useful and harmonious ministry of twenty-three years' duration."

It must not be supposed that he was endowed with any rich benefice; the town was small and humble; he preached in a dwelling-house or schoolhouse; and his salary was two hundred dollars a year. On this small stipend, aided by the labor of his hands, partly on the farm, and partly in making shoes, he more than supported his growing family—he found the art of being beneficent. Many of his parishioners could ill afford to pay their proportion of the small sum; and when the time for collecting it drew near, to the poorer ones he gave a receipt in full, relinquishing all claims upon them. When a hard season came, and there was no provision for a winter school, he threw open the door of his house, invited the children to his study, and gave them regular and daily instruction. With all these wearing occupations, the activity of his mind was constant; he entered with interest into the subjects which engaged public attention, studied with pen in hand, writing down his thoughts, and publishing in the public journals. His publications early attracted attention; and the obscure minister of an obscure place began to be heard of in the circles of the learned and affluent. In the midst of this

scene of prosperity—for such in truth it might be termed, their few and simple wants having made their means a competency, domestic love and harmony shedding its happy influence within their humble dwelling, and the gentle mistress of the house, like our first mother, amid fruits and flowers making a paradise of home—amid all this, there came a sad reverse.

Mr. Worcester had engaged to preach for a brother minister, and with the primitive simplicity of the times, took his wife on a pillion behind him to go to the appointed place. The horse became unruly, and Mrs. Worcester was thrown from her seat. At the time she did not appear much injured, but her situation made the accident alarming. Just one month after, the New England thanksgiving arrived—an anniversary instituted by the founders of the colony, and scrupulously observed to this day by their descendants. As it is an observance peculiar to New England, it may not be amiss to say a word on the subject. It was originally designed to be observed rather as a day of prayer than feasting; but, as is natural, friends collected around the board after the morning public service, and the dinner soon became an important feature in thanksgiving-day. At this period of Mr. Worcester's ministry it had become one of recreation as well as public devotion; and many joyful hearts were saddened as they heard on their way to church that the wife of their minister was ill, and not expected to live an hour. "It was a blustering November day," said his daughter, "and I never hear the wind blowing and whistling without remembering it." She was only six years old, but her recollections are vivid on the subject. "The minister," she added, "who performed the funeral services held my two elder brothers and myself up to look on our mother, and said, 'She is not dead, but sleepeth.' I wondered what he meant." This little unconscious child was destined in later years to be the nurse and sole companion of her father. Left with the charge of eight children, it became imperative to provide for their well-being. An excellent successor to his wife was found, who became a mother to them. It was a happy union, and her life was prolonged till within five years of his own death.

We have thus far endeavored to follow, in a summary manner, the life of Noah Worcester, but our limits do not allow us to continue this sketch, slight as it is; we hasten to the great object of this memoir.

In 1813, he removed to Brighton, in the vicinity of Boston, at the solicitation of four clergymen of the highest respectability, to edit a periodical called *The Christian Disciple*. The character of this work was one of gentleness, candor, and charity. "The Disciple,"

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says Dr. Ware, "as it came forth with its monthly burden to the church, might remind one of the aged disciple, John, who is said from sabbath to sabbath to have risen before the congregation to repeat this affectionate exhortation, 'Little children, love one another.'"

His mind had long been revolving the great subject of war. "At first," he says, "my views were perplexed, dark, and confused;" but the war of 1812, between Great Britain and the United States, operated with him an entire conviction; and in 1814 he wrote "A Solemn Review of the Custom of War." This, says his biographer, was the most successful and efficient pamphlet of any period. It has been translated into many languages, and circulated extensively through the world, and has been one of the chief instruments by which the opinions of society have been affected in the present century. It found a response in every heart; the world was wearied with battles; and enough were found in every country to repeat and enforce its doctrines. The Massachusetts Peace Society was formed, and the publication of "The Friend of Peace" began in 1819, and was continued in quarterly numbers for ten years. Noah Worcester devoted his talents to this work. The revolution it created in society sufficiently proves its power and richness; it was full of variety and argument, and enlivened with a quaint shrewdness of remark, and a gentle humor, which "just opened upon the reader, like the quiet heat of a summer-day's twilight, and then disappeared."

It is on this ground, as the apostle of peace, that we consider him one of the most remarkable men of the age, and one worthy to be known to our readers. He carried the world perceptibly forward—he opened a new era in its history—he made the abolition of war practicable by reasoning and demonstration. To circulate pacific opinions in his own country, he considered but a small part of his work. He wrote to the emperor Alexander of Russia, and received an answer dated St. Petersburg, July 4, 1807, assuring him of his "cordial approbation." We can only quote the concluding sentence: "Considering the object of your society, the promotion of peace among mankind, as one so eminently congenial to the spirit of the gospel of Jesus Christ, I have judged it proper to express these my sentiments respecting your labors, in answer to your communications to me on this subject."

In a letter from Prince Alexander Galitziny, we find the concluding sentence: "Most earnestly praying for every blessing to accompany your labor in promoting peace on earth, and good will among men, I shall esteem it a peculiar honor to be among the members of such a humane society."

Mr. Worcester received letters from distinguished men, and from foreign societies. Among the collection of letters addressed to him, it may not be uninteresting to mention one from Jeanne Pierre Boyer, president of the republic of Hayti. It is dated, "Port-au-Prince, le 9 June, 1818, An' 15 de l'Independance," and breathes throughout a spirit of peace.

All these tokens of respect and approbation were encouraging to the Friend of Peace; and it is justly observed that "by commencing a systematic enterprise against war, he set in motion an agency which unites itself with the other agencies now carrying forward the progress of man, and which are so knit together, and so reciprocally strengthen each other, that they make sure the final conquest of the world." That the work is still incomplete we see too many proofs; but have we not reason to believe that a wonderful change of opinion has taken place. The great principles of peace are well understood. The world can only be changed through its opinions. Noah Worcester set in motion that direct action which goes at once to the bottom of the subject. The active combination of peace societies throughout the Christian world, by agents and books, bear witness to the value of his labors; it was owing to his pamphlet called "A Solemn Review of the Custom of War," which appeared without a name or any recommendation, that the "Peace Society of Massachusetts" was formed. "He began his efforts," said the late Dr. Channing, "in the darkest day, when the whole civilized world was shaken by conflict, and threatened by military despotism. He lived to see more than twenty years of general peace, and to see through these years a multiplication of national ties, an extension of commercial communications, an establishment of new connexions between Christians and learned men through the world, and a growing reciprocity of friendly and beneficent influence among different states—all giving aid to the principles of peace, and encouraging hopes which a century ago would have been deemed insane." Noah Worcester believed that no mightier man than William Penn ever trod the soil of America, when entering the wilderness unarmed, and stretching out to the savage a hand which refused all earthly weapons, in token of brotherhood and peace. He believed in the power of Christian love to subdue and control the angry passions, and his whole demeanor expressed this feeling. There was an unusual gentleness in his manner, and at the same time a dignity which at once commanded respect. He was tall and athletic in his form; as he advanced in life his silver locks fell to his shoulders; though he gave the beholder

an idea of meekness, it was justly said, there was a majesty in his meekness. We well remember this venerable man near the close of his life—his flowing locks, his benignant smile—his hand usually when he spoke placed upon his heart—for he was suffering from some disease in that region. We often met him in his quiet walks in a neighboring wood, belonging to his true and constant friend the late Gorham Parsons. His mind was impressed by the beautiful objects of nature, and cultivated by poetry and music; his residence was as patriarchal as his life, and we rejoice to say that this residence has passed into the hands of the daughter before alluded to. His second wife, who seems to have been all he could wish, died five years before him, and he was left alone with his only unmarried daughter. She watched over him day and night, inheriting his own peculiar sweetness and gentleness, and soothing and comforting him under the infirmities of age. By her care and economy she made his means sufficient for all his wants, and gave an air of neatness and taste to the little tenement which he rented from Mr. Parsons at a low rate. He spoke of his old age as the happiest part of his life. "When I have visited him," says Dr. Channing, "in his last years, and looked on his serene countenance, and heard his cheerful voice, and seen the youthful earnestness with which he was reading a variety of books, and studying the great interests of humanity, I have felt how little of this outward world is needed to our happiness; I have felt the greatness of the human spirit, which could create to itself such joy from its own resources." He closed his mortal life October 31, 1837, aged 79 years. A monument has been erected to his memory at Mount Auburn, by numerous friends. On one side is this inscription: "Blessed are the peacemakers, for they shall be called the children of God."

THE PHILOSOPHY OF A TEAR.

BEAUTIFUL TEAR! whether lingering upon the brink of the eyelid, or darting down the furrows of the care-worn cheek—thou art beautiful in thy simplicity—great because of thy modesty—strong from thy very weakness. Offspring of sorrow! who will not own thy claim to sympathy! who can resist thy eloquence! who can deny mercy when thou pleadest? Beautiful Tear!

Let us trace a tear to its source. The eye is the most attractive organ of animal bodies. It is placed in a bony socket, by which it is

protected, and wherein it finds room to perform the motions requisite to its uses. The rays of light which transmit the images of external objects enter the pupil through the crystalline lens, and fall upon the retina, upon which, within the space represented by a dime, is formed, in all beauty and perfection, an exact image of many miles of landscape, every object displaying its proper color and true proportions—trees and lakes, hills and valleys, insects and flowers, all in true keeping, are there shown at once, and the impression produced thereby upon the filaments of the optic nerve causes a sensation which communicates to the mind the apparent qualities of the varied objects we behold.

That this wonderful faculty of vision may be uninterrupted, it is necessary that the transparent membrane which forms the external covering of the eye shall be kept moist and free from the contact of opaque substances. To supply the fluid which shall moisten and cleanse the eye, there is placed at the outer and upper part of the ball a small gland, which secretes the lachrymal fluid, and pours it out at the corner of the eye, whence, by the motion of the lids, it is equally spread over the surface, and thus moisture and clearness are at once secured.

When we incline to sleep, the eyes become comparatively bloodless and dull. The eyelids drop to shut out everything which might tend to arouse the slumbering senses. The secretion by the lachrymal glands is probably all but suspended, and the organs of sight participate in the general rest. When, after a long night's sleep, the eyelids first open, there is, therefore, a dulness of vision, arising probably from the dryness of the cornea: then occur the rapid motions of the eyelids, familiarly termed "winking"—sometimes instinctively aided by rubbing with the hands—and after a few moments the "windows" of the body have been properly cleansed and set in order, the eye adjusted to the quantity of light it must receive, and we are "awake" for the day, and may go forth to renew our acquaintance with the beauties of nature.

It is from the glands which supply this moisture that tears flow. Among physiologists it is well known that *emotions*—impressions upon the nervous system—exercise a powerful and immediate influence upon the secretions. As, for instance, the mere thought of some savory dish, or delicious fruit, or something acid—as the juice of the lemon—will excite an instant flow of the salivary fluid into the mouth. An *emotion* of the mind influences the lachrymal glands, which copiously secrete and pour forth the crystal drops, and these, as they appear upon the surface of the eye, we denominate *tears*.

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A similar action, called forth by another kind of excitement, occurs when dust or other irritating substance comes in contact with the eye: the glands instantly secrete abundantly, and pouring the crystal fluid out upon the surface, the eye is protected from injury, and the offending substance is washed away. The feelings which excite excessive laughter or joy also stimulate this secretion—the eyes are said to "water." It is only when the crystal drop comes forth under the impulse of sorrow—thus speaking the anguish of the mind—that it can properly be called a *tear*. Hence its sacred character, and the sympathy which it seldom fails to create.

Every tear represents some indwelling sorrow preying upon the mind and eating out its peace. The tear comes forth to declare the inward struggle, and to plead a truce against further strife. How meet that the eye should be the seat of tears—where they can not occur unobserved, but blending with the speaking beauty of the eye itself must command attention and sympathy.

Whenever we behold a tear, let our kindest sympathies awake—let it have a sacred claim upon all that we can do to succor and comfort under affliction. What rivers of tears have flown, excited by the cruel and perverse ways of man! War has spread its carnage and desolation, and the eyes of widows and orphans have been suffused with tears! Intemperance has blighted the homes of millions, and weeping and wailing have been incessant! A thousand other evils which we may conquer have given birth to tears enough to constitute a flood—a great tide of grief. Suppose we prize this little philosophy, and each one determine never to excite a tear in another—how pleasantly will fare mankind! Watching the eye as the telegraph of the mind within, let us observe it with anxious regard; and whether we are moved to complaint by the existence of supposed or real wrongs, let the indication of the coming tear be held as a sacred truce to unkindly feeling, and all our efforts be devoted to the substitution of smiles for tears!

MUTUAL INSTRUCTION CLASSES.

To make a mutual instruction class successful, it should be so conducted as to sustain the character it assumes. It should be emphatically an *instruction* class, and every member should feel himself at the close of each meeting in the possession of some fact he had not known before. This constitutes the reward of membership, and supplies a tie strong enough to bind a group of inquirers in

indissoluble union. Everything practicable should be done to render the meetings of the class not merely useful but entertaining. The dull hending over books is far inferior to other and more social modes of acquiring knowledge. A plan which works well is, to propose to the class that some work of recognised excellence be read and conversed upon. Take, for instance, Combe's work on the *Physiology of Health*. Let A. read aloud to the class on one night, B. on another, and so on in rotation. One half-hour (or more) to be spent in reading, a subsequent half-hour (or more) in conversation upon the subject read. Let the reader stand up, uncovered, and read aloud, as to a larger audience. At the close, C. requests that the passage relating to exercise before and rest after meals, be reread, because of its importance. D. wishes the reader again to state the components of atmospheric air. In connexion with this latter subject, E. suggests a simple method for the ventilation of workshops; and F. enlarges upon its importance, as a means for the preservation of health.

These outlines will be sufficient to show how evenings may be spent in a way at once instructive and entertaining. A. is exercised in reading—B. C., &c., are improved in their conversational abilities—and all are benefited by the acquirement of knowledge, while the part each takes in the proceedings sharpens the faculties and shakes off drowsiness.

Occasionally, subjects may be set apart for debate. But it must always be remembered that discussion involves the *possession* of knowledge, rather than the *acquirement* of it. But matters will constantly arise out of these readings upon which the members may differ. Thus Combe recommends the use of alcoholic stimulants under certain circumstances. P., however, sees reason to dissent from Combe's opinion; and is strengthened by the experience of six years, during which, in illness and in health, he has lived in entire disuse of them. He believes, moreover, that the use of intoxicants, whether medicinal or otherwise, is fraught with dangerous consequences, and should be altogether avoided—he, therefore, proposes to the class to discuss the question: Are alcoholic drinks essential under any and what circumstances? This subject discussed, various opinions are elicited, and H. proposes to treat the subject in another sense—Do the social and physical evils, arising from the use of alcoholic drinks, outweigh the supposed benefits from them, and demand their entire disuse?

In this way, question will multiply upon question—and the perusal of one work will supply various matters for discussion, at the same time that the members of the class are fitting themselves to analyze the matter in

dispute. Subjects chosen for debate should always have some practical bearing upon the welfare of the world.

A good plan is occasionally to have a public meeting, and the friends of the members invited to attend. At these meetings each member should say something upon a subject in which he is most skilled and interested. A. is appointed chairman; and being a mechanic, opens by a description of the steam-engine, and offers a few remarks upon the revolution produced by its mighty powers. B., a printer, describes the process of printing, and adverts to the great influence of the press. C. has looked into the almanac and seen the announcement of a partial lunar eclipse: he invites his fellow-members to watch the interesting phenomena, and briefly describes the laws by which it is produced. D. has brought a curious specimen of natural history, which he has borrowed to show to the class, and explains its peculiarities. E. describes the electric telegraph, and displays a few diagrams of his own preparation. F. communicates a few thoughts upon natural theology; and the chairman having taken notes of the proceedings, concludes by a summary of the subjects, remarks upon the pleasures of the night, and encourages the members to persevere in their good course. In these proceedings, every speaker should stand uncovered. The chairman should occupy an elevated seat, and every regard should be bestowed upon order and mutual respect. The interest and profit of these meetings are greatly enhanced by due regard to such regulations; while those who participate in them are fitted for such important stations in life as they may be called upon to fill hereafter.

That which has been suggested here to classes, may also be carried out in families with great profit. Why should not every family constitute a class, where parents and children, uncles, aunts, and nephews, and a circle of cousins and acquaintances, now and then meet alternately at each other's homes, to carry on these sweet pursuits, and thus add to the charms, the poetry of life, and multiply its pleasures?

WEIGHTS AND MEASURES.

Wheat flour, 1 pound is 1 quart.
Indian meal, 1 pound 2 ounces is 1 quart.
Butter, when soft, 1 pound 1 ounce is 1 quart.
Loaf-sugar, broken, 1 pound is 1 quart.
White sugar, powdered, 1 pound 1 ounce is 1 quart.
Best brown sugar, 1 pound 2 ounces is 1 quart.
Eggs, average size, 10 eggs are 1 pound.
Sixteen large tablespoonfuls are half a pint.
Eight tablespoonfuls are 1 gill.
Four large tablespoonfuls are half a gill.
A common-sized tumbler holds half a pint.
A common-sized wine-glass holds half a gill.

GOLD & SILVER MINES OF MEXICO.

THE gold and silver mines of Mexico have not been overrated. From the discovery of this continent in 1492, to the year 1803, the gold and silver obtained from the American mines amounted to the enormous sum of \$5,706,700,000. Of this sum an average of \$35,000,000 was produced after the year 1750. Although a large amount of the precious metals are annually produced in South America, Mexico is constantly increasing the number of her mines, so that her facilities for furnishing gold and silver are second to none on the continent. The quantity of silver produced by the American mines as compared with the gold, is as forty-six to one.

The silver ore obtained in Mexico is not as valuable as that obtained in Europe; yielding but one ounce of pure silver to four hundred ounces of ore; while the average yield of the European ore is very near three times as great. The mines of Europe have been worked for centuries, and the heavy expense required to obtain the ore from the bowels of the earth, greatly increases the cost of silver. The abundance of ore, and the facilities for procuring it in Mexico, more than compensate for its comparative barrenness. But few large mines have been opened and continually worked in Mexico. It has been the common practice, when the water or other causes render the mining operations difficult, to quit the spot and commence at some new place.

Semi-barbarous as Mexico has been, there is no country on the globe where the labor of procuring the precious metals is so well rewarded as in that country. At Potosi, in South America, the mines are worked entirely by Indians, six thousand of whom are sent every eighteen months from the neighboring provinces, the pay of each being about thirty cents a day. In Europe, most of the mines are worked by criminals. In Mexico, the laborer who works in the mines earns five dollars per week, and those employed to carry the ore from the mine to the furnace, receive nearly two dollars per day's work of six hours, while the common laborer of the country does not earn more than a dollar and a half per week.

Specimens of virgin gold have sometimes been discovered in Mexico, but this metal is commonly found combined with quartz, mica, slate, and the various members of the greenstone family.

The annual quantity of quicksilver which is used in Mexico for separating the silver from the ore, exceeds 200,000 pounds. This is obtained from Spain, Austria, Italy, and Germany. A failure of the regular supply of quicksilver would materially retard the pro-

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REMEDIES AGAINST MOTHS.

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duction of silver from the Mexican mines. The Rothschilds are aware of this fact, and have sometimes operated extensively in quicksilver, by purchasing all that was in the market, and raising its value before the amount required for the regular consumption could be procured from the mines. Without the aid of quicksilver, the cost of separating the silver from the ore would nearly equal the value of the silver procured.

The quicksilver mines of Idria, in Austria, near the gulf of Venice, are the most extensive of any in the world. These mines were discovered in 1497, by a cooper, who, having placed a new tub under a dropping spring at night, discovered in the morning a shining fluid at the bottom of the tub, which was so heavy that he could hardly move it. He carried the article to an apothecary in a neighboring town, who gave him a small sum for it, and requested him to bring more.

Notwithstanding the large quantities of gold imbedded in the earth in Mexico, the expense of preparing it for use from its rough state as found in the mine, is an item of considerable importance. It is easy to imagine that the mines of Mexico abound in lumps of solid gold, but the truth is far different; nor would it at all benefit America if gold could be produced at one half its present cost. The most favored nation in this respect (Spain) has dwindled from a powerful people to an indolent and powerless race; while the inhabitants of Iceland, who have few luxuries provided by nature, being compelled to depend upon their own exertions for a livelihood, present an example for morality and intelligence which might be copied by nations whose lots are cast in countries abounding, as it were in milk and honey.

REMEDIES AGAINST MOTHS.

THESE very troublesome and destructive little depredators may, with a little trouble, be effectually removed, and rooms, drawers, &c., be kept free from them for years. The hints given in the following remarks from the London Magazine will be valuable to those good housewives who have not, hitherto, availed themselves of similar means for the extermination of this insect. The writer says: It is an old custom with some housewives to throw into their drawers every year a number of fir cones, under the idea that their strong resinous smell might keep away the moth. Now, as the odor of these cones is due to turpentine, it occurred to Reaumur to try the effect of this volatile liquid. He rubbed one

side of a piece of cloth with turpentine, and put some grubs on the other; the next morning they were all dead, and strange to say, had voluntarily abandoned their sheaths. On smearing some paper slightly with oil, and putting this into a bottle with some of the grubs, the weakest were immediately killed; the most vigorous struggled violently for two or three hours, quitted their sheaths, and died in convulsions. It was soon abundantly evident that the vapor of oil or spirits of turpentine acts as a terrible poison to the grubs. Perhaps it may be said that even this remedy is worse than the disease, but as Reaumur justly observes, we keep away from a newly-painted room, or leave off for a few days a coat from which stains have been removed by turpentine; why, therefore, can we not once a year keep away for a day or two from rooms that have been fumigated with turpentine?

It is, however, surprising, how small a quantity of turpentine is required; a small piece of paper or linen just moistened therewith, and put into the wardrobe or drawers a single day, two or three times a year, is a sufficient preservation against moths. A small quantity of turpentine dissolved in a little spirits of wine (the vapor of which is also fatal to the moth) will entirely remove the offensive odor, and yet be a sufficient preservative. The fumes of burning paper, wool, linen, feathers, and of leather, are also effectual, for the insects perish in any thick smoke; but the most effectual smoke is that of tobacco. A coat smelling but slightly of tobacco is sufficient to preserve a whole drawer. The vapor of turpentine and the smoke of tobacco are also effectual in driving away flies, spiders, ants, earwigs, bugs, and fleas.

"THE LABORER IS WORTHY OF HIS HIRE."

—Man does not deal with his brother as God deals with him. He causes the sun to shine, and his showers to descend with equal profusion upon all—both upon the high and the low, the rich and the poor. But in adjusting the rewards of labor, we adopt no such equitable rule. We pay largely for labor of the head, and little for the labor of the hands. We graduate the scale of the prices, not according to the utility or the actual severity of the labor—not in proportion to the outlay of physical strength, or the time occupied—but to the demand and supply. Hence that class of mankind—laborers, being the most numerous class—are the worst-paid people in society. We can not control the laws of nature, yet this we may do: pay as liberally as we can afford for labor, common labor, the labor of the poor.

CONSOLATIONS.

My father, our work is fatiguing to-day; the spade rebounds upon the parched earth; the sun darts rays of fire; the dust raised by the south wind blows in whirlwinds over the plain.

My son, He who sends burning gales sends also bedewing cloudlets. To each day belongs its pain and its hope, and after labor comes repose.

My father, do you see those poor plants, how they languish, and how their yellow leaves droop down their exhausted stalk?

They will rise up again, my son; no blade of grass is forgotten; fruitful rains and fresh dews are always provided for it amidst the celestial treasures.

My father, the birds are silent in the foliage; the quail, immoveable in the furrow does not even recal its companion; the heifer seeks the shade; and the ox, with his limbs folded beneath his heavy body, his neck stretched out, dilates his large nostrils, in order to respire the air which he is in need of.

God, my son, will restore the birds their voices, and the oxen their strength, exhausted by the extreme heat. The breeze which will reanimate them already glides over the sea.

Let us seat ourselves, my father, upon the fern that borders the pond, near that old oak whose hanging branches so gently touch the surface of the water. How calm and transparent it is! How gayly the fishes play there! Some pursue their winged prey, poor gnats just entered into being; others, raising their heads, with their mouths half open, appear to be softly kissing the air.

He who has made all things, my son, has everywhere bestowed his inexhaustible gifts, life, and the joy of life. What appears to us evil is but the similitude of good—its shadow.

And yet, my father, you suffer. What labor, what fatigue, you endure, in order to provide for our wants! Are you not poor? Is not my mother poor? It is the sweat of your brow which has given me food; have you ever, for one single day, had the morrow provided for?

What signifies the morrow to us, my son? The morrow belongs to God; let us confide in him. Whoso rises in the morning knows not whether he shall see the evening. Why, then, trouble and disquiet one's self about a time which will perhaps never arrive? We live here below like the swallow, seeking from day to day, the bread of each day, and like her, when the winter approaches, a mysterious power draws us to milder climes.

What is this, my father? It resembles a corpse wrapped in its shroud, or an infant rolled in swaddling-clothes.

My son, it was a crawling worm, it will soon be a living flower, an aerial form, which, decked in its brightest colors, will rise toward heaven.

HOW TO MAKE STEEL.

STEEL is made of the purest malleable iron, by a process called cementation. In this operation, layers of malleable iron and layers of charcoal are placed one upon another, in a proper furnace, the air is excluded, the fire raised to a considerable degree of intensity, and kept up for eight or ten days. If upon trial of a bar, the whole substance is converted into steel, the fire is extinguished, and the whole is left to cool for six or eight days longer. Iron thus prepared is called blistered steel, from the blisters which appear on its surface. In England, charcoal alone is used for this purpose: but Duamel found an advantage in using one fourth to one third of wood ashes, especially when the iron was not of so good a quality as to afford steel possessing tenacity of body as well as hardness. These ashes prevent the steel-making process from being effected so rapidly as it would otherwise be, and give the steel pliability without diminishing its hardness. The blisters on the surface of the steel, under this management, are smaller and more numerous. He also found that if the bars, when they are put into the furnace, be sprinkled with sea-salt, this ingredient contributes to give body to the steel. If the cementation be continued too long, the steel becomes porous, brittle, or a darker fracture, more fusible, and capable of being welded. On the contrary, steel cemented with earthly infusible powders is gradually reduced to the state of forged iron again. Excessive or repeating heat in the forge is attended with the same effect.

The properties of iron are remarkably changed by cementation, and it acquires a small addition to its weight, which consists of the carbon it has absorbed from the charcoal, and amounts to about the hundred and fiftieth or two hundredth part. It is much more brittle and fusible than before; and it may still be welded like bar-iron, if it has not been fused or over-cemented; but by far the most important alteration in its properties is, that it can be hardened or softened at pleasure. If it be made red hot, and instantly cools, it attains a degree of hardness which is sufficient to cut almost any other substance; but if heated and cooled gradually, it becomes nearly as pure as iron, and may, with much the same facility, be manufactured into any determined form.

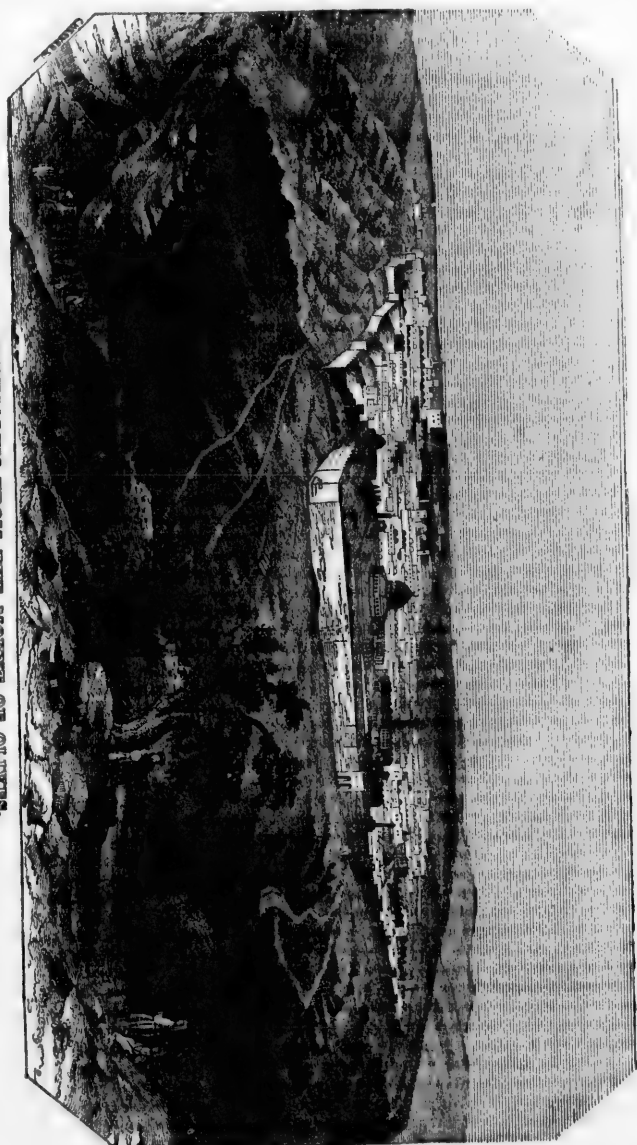
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JERUSALEM FROM THE MOUNT OF OLIVES.





Pool of Siloam.

TRAVELS IN THE HOLY LAND.—No. 3.

BY HARRIET MARTINEAU.

THERE is little pleasure in visiting the places within the walls of Jerusalem which are reported by the monks to be the scenes of the acts and sufferings of Christ. There is no certainty about these; and the spots regarding which there can be no mistake are so interesting, that the mind and heart of the traveller turn away from such as may be fabulous. About the site of the temple there is no doubt; and beyond the walls one meets at every turn assurance of being where Christ walked and taught, and where the great events of Jewish history took place. Let us go over what I found in one ramble; and then my readers will see what it must be to take walks in the neighborhood of Jerusalem.

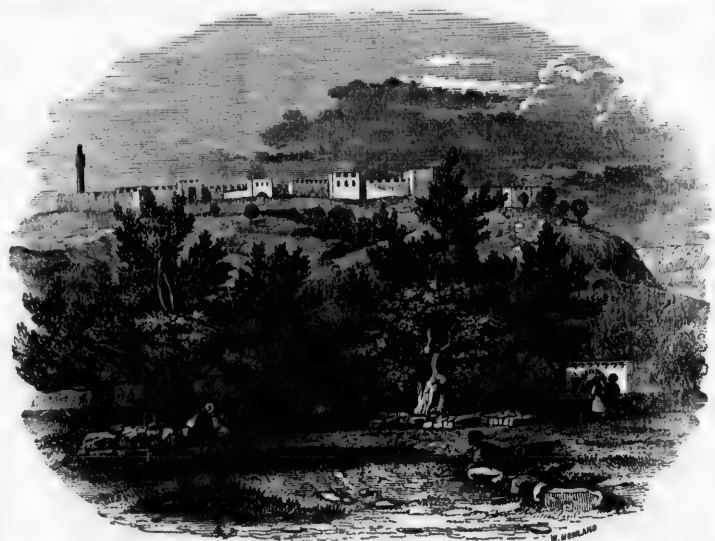
Leaving the city by the Bethlehem gate, we descended into the valley of Hinnom or Gehenna. Here there are many tombs cut in the rock, with entrances like door-ways. When I speak of Bethany, I shall have occasion to describe the tombs of the Jews. It was in this valley, and close by the fountain of Siloam, that in the days of Jewish idolatry, children passed through the fire, in honor of Moloch. This is the place called Tophet in scripture—fit to be spoken of as it was, as an image of hell. Here, in this place of corruption and cruelty, where fires hovered about living bodies, and worms preyed on the dead—here was the imagery of terror—"the worm that dieth not, and the fire that is not quenched." The scene is very different now. The slopes are terraced, that the winter rains may not wash away the soil; and these terraces were to-day green with springing wheat;



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the valley of Hinnom or
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Part of the Valley of Jehosaphat, and entrance to Jerusalem.





Garden of Gethsemane.

and the spreading olives and fig trees cast their shadows on the rich though stony soil. Streams were led from the pool of Siloam among the fields and gardens; and all looked cool and fresh in the once hellish spot. On the top of the opposite hill was the Field of Blood—the field bought as a burial-place for strangers, by the priests to whom Judas returned his bribe. For the burial of strangers, it was used in subsequent ages; for pilgrims who died at the Holy City were laid there. It is now no longer enclosed; but a charnel-house marks the spot.

The pools all round Jerusalem are beautiful; the cool arching rock-roof of some, the weed-tufted sides and clear waters of all, are delicious. The pool of Siloam is still pretty—though less so, no doubt, than when the blind man, sent to wash there, opened his eyes on its sacred stream. The fountain of Siloam is more beautiful than the pool. It lies deep in a cave, and must be reached by broad steps which wind down in the shadow. A woman sat to-day in the dim light of reflected sunshine—washing linen in the pool. Here it was, that in days of old the priest came down with his golden pitcher, to draw water for the temple service; and hither it was that the thought of Milton came when he sang of—

Siloa's brook that flowed
Fast by the oracle of God.

We were now in the valley of Jehoshaphat; and we crossed the bottom of it, where the brook Kedron must run when it runs at all; but it seems to be now merely a winter torrent, and never to have been a constant stream. When we had ascended the opposite side of the valley, we were on the Mount of Olives. The ascent was steep—now among tombs, and now past fields of waving barley, flecked with the shade of olive-trees. As we ascended, the opposite hill seemed to rise, and the city to spread. Two horsemen in the valley below, and a woman with a burden on her head, mounting to the city by a path up Moriah, looked so surprisingly small as to prove the grandeur of the scenery. Hereabouts it was, as it is said, and may reasonably be believed, that Jesus mourned over Jerusalem, and told his followers what would become of the noble city which here rose upon their view, crowning the sacred mount, and shining clear against the cloudless sky. Dwellers in our climate can not conceive of such a sight as Jerusalem seen from the summit of the Mount of Olives. The Moab mountains, over toward the Dead sea, are dressed in the softest hues of purple, lilac, and gray. The hill-country to the north is almost gaudy with its contrasts of color; its white or gray stones, red soil, and crops of vivid green. But the city is the glory—aloft on the steep—its long lines of



the valley of Jehoshaphat; bottom of it, where the run when it runs at all; now merely a winter tor- have been a constant had ascended the opposite re were on the Mount of was steep—now among fields of waving barley, le of olive-trees. As we e hill seemed to rise, and Two horsemen in the val- man with a burden on her e city by a path up Mo- ising small as to prove scenery. Hereabouts it and may reasonably be mourned over Jerusalem, s what would become of here rose upon their view, mount, and shining clear s sky. Dwellers in our ceive of such a sight as the summit of the Mount b mountains, over toward ressed in the softest hues gray. The hill-country t gaudy with its contrasts or gray stones, red soil, reen. But the city is the steep—its long lines of

wall clearly defining it to the sight, and every minaret and cupola, and almost every stone marked out by the brilliant sunshine against the deep blue sky. In the spaces unbuilt on within the walls, are tufts of verdure; and cypresses spring here and there from some convent garden. The green lawns of the Mosque of Omar, are spread out small before the eye, with their groups of tiny gay moving people. If it is now so glorious a place to the eye, what must it have been in the days of its pride! Yet in that day, when every one looked for the exulting blessing "Peace be within thy walls, and prosperity within thy palaces!" there came instead the lamentation over the Jerusalem that killed the prophets and stoned the messengers of Jehovah, and whose house must be therefore left desolate.

The disciples looking hence upon the strength of the walls, the massiveness of the temple buildings, then springing 480 feet from the bed of the brook below, and the depth and ruggedness of the ravines surrounding the city on three sides, might well ask when those things should be, and how they should be accomplished. On the fourth side, the north, where there is no ravine, the Roman army was encamped. We could now see that rising-ground, once covered with the Roman tents, but to-day with corn-fields and olive-grounds. The Romans encamped one legion on the Mount of Olives; but it could not do any harm to the city; and the only available point of attack—the north side—was guarded by a moat and three walls. The siege was long; so long that men's hearts failed them for fear, and at least one famished woman ate her own child: and at last the city was taken and nearly destroyed; and of the temple, not one stone was left upon another. How we were in the midst of these scenes to-day! We stood where the doom was pronounced; below us was the camp of the single legion I have mentioned; opposite was the humbled city, with the site of the temple courts; and over to the north was the camp of the enemy. Here was the whole scene of that "great tribulation, such as was not known from the beginning of the world."

From the summit of Olivet, we went down to the scene of that other tribulation—that anguish of mind which had perhaps never been surpassed from the beginning of the world. "When Jesus had spoken these words" (his words of cheer after the last supper), "he went forth," we are told, "with his disciples over the brook Kedron, where was a garden." This garden we entered to-day, from the other direction, and left it by crossing the bed of the brook. It is a dreary place now, very unlike what it must have been

when "Jesus oftentimes resorted thither with his disciples." It is a plot of ground on a slope above the brook, enclosed with fences of loose stones, and occupied by eight extremely old olive-trees—the oldest, I should think, that we saw in all our travels. I do not mean that they could have been growing in the days of Christ. That is supposed to be impossible; though I never could learn what is the greatest age known to be attained by the olive-tree. The roots of these were supported by little terraces of stones, that neither trees nor soil might be washed down the slope by the winter torrents. But little remains of these once fine trees but hollow trunks and a few straggling branches. It is with the mind's eye that we must see the filling up of this garden enclosure where Jesus "oftentimes resorted thither"—its orchard of fig, pomegranate, and olive-trees, and the grass or young springing corn under foot. From every part of it the approach of Judas and his party must have been visible. By their "lanterns and torches and weapons," gleaming in the light, they must have been seen descending the hill from the city gate. The sleeping disciples may not have heeded the lights and footsteps of the multitude; but step by step as it wound down the steep, and then crossed the brook, and turned up to the garden, the victim knew that the hour of his fate drew on.

By the way the crowd came down, we now ascended toward the city, turning aside, however, to skirt the north wall, instead of returning home through the streets. Not to mention now other things that we saw, we noted much connected with the siege:—the nature of the ground—favorable for the encampment of an army, and the shallow moat under the walls, where the Romans brought two great wooden towers on wheels, that the men in the towers might fight on a level with those on the walls, and throw missiles into the town. This scene of conflict is very quiet now. A crop of barley was ripening under the very walls: and an Arab, with a soft, mild countenance, was filling his water-skins at the pool, called the sheep-pool, near the Damascus gate. The proud Roman and despairing Jew were not more unlike each other than this Arab, with his pathetic face was unlike them both. As he stooped under the dim arches of the rock, and his red cap came into contrast with the dark gray of the still water below, and the green of the dangling weeds over his head, our thoughts were recalled to our own day, and to a sense of the beauty we meet in every nook and corner of the Holy Land.

From this ramble, my readers may see something of what it is to take walks in the neighborhood of Jerusalem.

DUTIES OF SISTERS TO BROTHERS.

The important relation which sisters bear to brothers can not be fully appreciated without a greater knowledge of the world and its temptations to young men, than girls in their teens can be supposed to possess; but they may be assured that their companionship and influence may be powerful agents in preserving their brothers from dissipation, in saving them from dangerous intimacies, and maintaining in their minds a high standard of female excellence.

If your brothers are younger than you, encourage them to be perfectly confidential with you; win their friendship by your sympathy in all their concerns, and let them see that their interests and their pleasures are liberally provided for in the family arrangements. Never disclose their little secrets, however unimportant they may seem to you; never pain them by any ill-timed joke, never repress their feelings by ridicule; but be their tenderest friend, and then you may become their ablest adviser. If separated from them by the course of school or college education, make a point of keeping up your intimacy by full, free, and affectionate correspondence; and when they return to the paternal roof, at that awkward age between youth and manhood, when reserve creeps over the mind, like an impenetrable veil, suffer it not to interpose between you and your brothers. Cultivate their friendship and intimacy with all the address and tenderness you possess: for it is of unspeakable importance to them that their sisters should be their confidential friends. Consider the loss of a ball or party, for the sake of making the evening pass pleasantly to your brothers at home, as a small sacrifice; one you should unhesitatingly make. If they go into company with you, see that they are introduced to the most desirable acquaintances, and show them that you are interested in their acquitting themselves well.

If you are so happy as to have elder brothers, you should be equally assiduous in cultivating their friendship, though the advances must of course be differently made. As they have long been accustomed to treat you as a child, you may meet with some repulses when you aspire to become a companion and a friend; but do not be discouraged by this. The earlier maturity of girls, will soon render you their equal in sentiment, if not in knowledge, and your ready sympathy will soon convince them of it. They will be agreeably surprised when they find their former plaything and messenger become their quick-sighted and intelligent companion, understanding at a glance what is passing in their hearts; and love and confidence on your

part will soon be repaid in kind. Young men often feel the want of a confidential friend of the softer sex, to sympathize with them in their little affairs of sentiment, and happy are those who find one in a sister.

Once possessed of an elder brother's confidence, spare no pains to preserve it; convince him by the little sacrifices of personal convenience and pleasure which you are willing to make for him, that when you do oppose his wishes, it is on principle and for conscience sake; then will you be a blessing to him, and, even when differing from you, he will love and respect you the more for your adherence to a high standard.

So many temptations beset young men, of which young women know nothing, that it is of the utmost importance that your brothers' evenings should be happily passed at home, that their friends should be your friends, that their engagements should be the same as yours, and that various innocent amusements should be provided for them in the family circle. Music is an accomplishment, chiefly valuable as a home enjoyment, as rallying round the piano the various members of the family, and harmonizing their hearts as well as voices, particularly in devotional strains. We know no more agreeable and interesting spectacle, than that of brothers and sisters playing and singing together those elevated compositions in music and poetry which gratify the taste and purity of the heart, while their fond parents sit delighted by. We have seen and heard an elder sister thus leading the family choir, who was the soul of harmony to the whole household, and whose life was a perfect example of those virtues which we are here endeavoring to inculcate. Let no one say that we require too much of sisters, that no one can be expected to lead such a self-sacrificing life; for the sainted one to whom we refer, was all that we could ask any sister to be, and a happier person never lived. "To do good and make others happy," was her rule of life, and in this she found the art of making herself so.

Sisters should be always willing to walk, ride, and visit, with their brothers, and esteem it a privilege to be their companions. It is worth while to learn innocent games for the sake of furnishing brothers with amusement and making home the most agreeable place to them.

If your brothers take an interest in your personal appearance and dress, you should encourage the feeling by consulting their taste, and sacrificing any little fancy of your own to a decided dislike of theirs. Brothers will generally be found strongly opposed to the slightest indecorum in sisters; even those who are ready enough to take advantage of free-

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dom of manners in other girls, have very strict notions with regard to their own sisters. Their intercourse with all sorts of men enables them to judge of the construction put upon certain actions and modes of dress and speech, much better than women can; and you will do well to take their advice on all such points.

Brothers and sisters may greatly aid each other in judging of their friends of the opposite sex. Brothers can throw important light upon the character and merits of young men, because they see them when acting out their natures before their comrades, and relieved from the restraints of the drawing-room; and you can in return, greatly assist your brothers in coming to wise and just conclusions concerning their female friends. Your brothers may be very much indebted to the quicker penetration of women into each other's character, and saved by your discernment from being fascinated by qualities that are not of sterling value; but, in order to have the influence necessary to such important ends, you must be habitually free from a spirit of de-traction, candid in all your judgments, and ever ready to admire whatever is lovely and good in your own sex. If, when you dissent from your brother's too favorable opinion of a lady, he can with any justice charge you with a prejudice against her family, or a capricious dislike of her, your judgment, however correct, will have no weight, and he will be very likely to become, not only the lady's champion, but her lover.

If your brothers have received a classical education and you are studiously inclined, you may derive great assistance from them in the cultivation of your own mind, and bind them still closer to you in the delightful companionship of literary pursuits.

Many men who have passed unharmed through the temptations of youth, owed their escape from many dangers to the intimate companionship of affectionate and pure-minded sisters. They have been saved from hazardous meeting with idle company by some home engagement, of which their sisters were the charm; they have refrained from mixing with the impure, because they would not bring home thoughts and feelings which they could not share with those trusting and loving friends; they have put aside the wine-cup and abstained from stronger potations, because they would not profane with their fumes the holy kiss with which they were accustomed to bid their sisters good night.

The duties of sisters to each other are so obvious and well understood, that it will be needless to enter fully upon them here. If your heart is right toward God, and you feel that the great business of life is the education

of your immortal spirit for eternity, you will easily bear with the infirmities of others, because you will be fully impressed with a sense of your own; and when you can amicably bear and forbear, love will come in, to soften every asperity, heal every little wound, and make a band of sisters "helpers of each other's joy."

A few cases may arise, in the most harmonious families, wherein sisters may not fully understand each other's rights, and may therefore ignorantly trespass upon them; such, for instance, as where one of the family is very fond of reading, and wishes to have a certain portion of her time uninterruptedly given to that employment, and a sister keeps interrupting her by conversation, or appeals to her for aid in some lesson or piece of work. Sometimes a great reader is made the butt of the rest of the family for that very valuable propensity, and half her pleasure in it destroyed by its being made a standing joke among her brothers and sisters.

Sisters should as scrupulously regard each other's rights of property, as they would those of a guest staying in the house; never helping themselves without leave to the working materials, writing implements, drawing apparatus, books, or clothing of each other. It is a mistake to suppose that the nearness of the relationship makes it allowable; the more intimate our connexion with any one, the more necessary it is to guard ourselves against taking unwarrantable liberties. For the very reason that you are obliged to be so much together, you should take care to do nothing disagreeable to each other.

Love is a plant of delicate growth, and, though it sometimes springs up spontaneously, it will never flourish long and well without careful culture; and when we see how it is cultivated in some families, the wonder is, not that it does not spread so as to overshadow the whole circle, but that any sprig of it should survive the rude treatment it meets with.

Genuine politeness is a great fosterer of family love; it allays accidental irritation, by preventing harsh retorts and rude contradictions; it softens the boisterous, stimulates the indolent, suppresses selfishness, and, by forming a habit of consideration for others, harmonizes the whole. Politeness begets politeness, and brothers may be easily won by it to leave off the rude ways they bring home from school or college. Never receive any little attention without thanking them for it; never ask a favor of them but in cautious terms, never reply to their questions in monosyllables; and they will soon be ashamed to do such things themselves. You should labor, by precept and example, to convince them, that no

one can have really good manners abroad, who is not habitually polite at home.

Elder sisters exert a very great influence over the younger children of a family, either for good or for evil. If you are impatient, unfair in your judgments, or assume too much authority, you injure the tempers of these little ones, make them jealous of their rights, and render your own position a very unpleasant one; whereas, if you are patient and kind, and found your pretensions to dictate, not on your age, but on truth and justice, the younger children will readily allow your claims.

Young children are excellent judges of the motives and feelings of those who attempt to control them; and, if you would win their love, and dispose them to comply with your reasonable requests, you must treat them with perfect candor and uprightness. Never attempt to cheat, even the youngest, into a compliance with your wishes; for, though you succeed at the time, you lessen your influence by the loss of confidence which follows detection.

With every disposition to treat the younger ones kindly, elder sisters are often discouraged and discomfited by what they consider the over-indulgence of their parents toward the younger members of the family; but where this complaint is well founded, much is still in their power. They can, by judicious conduct, do a great deal to counteract the bad effects of this parental fondness, and make the little ones ashamed to take a mean advantage of it. The very indulgent are seldom just; now children value justice and strict adherence to promises more than indulgence, and you may mould them to your will by the exercise of those higher qualities.

It is the duty of elder sisters to take a lively interest in the education of the younger children, and to use all the advantages which they have received, for the benefit of those that are coming forward in the same line. They should aid their parents in the choice of schools, and ascertain what is actually learned at them. Where circumstances render it necessary that the elder children should assist in teaching the younger ones, it should be done cheerfully; not as a duty merely, but as a useful discipline. Some writers upon education consider teaching others as the best and most effectual way of learning one's self. When Madame de Genlis described what she considered as a perfect system of education, she represented her models as taking younger children to teach as a part of their own instruction. It has been said that we are never sure that we know a thing thoroughly, until we have taught it to another.

If the duty of teaching has its advantages, it also has its dangers: it is a very fatiguing

occupation, and ought not to occupy too much of a young person's time. Where this is required of a daughter, other home-duties should be remitted, and her day should be so apportioned as to leave her ample time for exercise and recreation, or the labor may prove injurious to her health. It is very seldom that one who has never attempted to teach others, can duly appreciate the labor of it; and a father so circumstanced, will sometimes think that as many hours may be given to it as he gives to his business; but this is a great mistake; nothing is so heavy a tax on mind and body as the act of communicating knowledge to other minds; and the more intelligently and lovingly it is done, the greater is the fatigue.

This duty should not be allowed to interfere with the further progress of the young teacher, for though it may be useful to go over old ground, with those who are learning, she should still be careful not to narrow her mind down to the standard of their habits; but refresh and invigorate it, at the same time, by exploring new fields of literature.

Those who are not called upon to teach younger brothers and sisters, may yet do them great good by exercising their minds in conversation, and by communicating useful information to them in their daily intercourse. The reverse of this we have sometimes observed with sorrow. We have seen amiable and well-informed girls act toward these little ones as if they were not at all responsible for the impressions they made on their tender minds. They would mislead a young inquirer by false information, and consider it a good joke; or they would harrow up young and susceptible minds by frightful stories, which, though amusing at the time, could not fail to send the little dears trembling to bed, afraid of the dark, and unable to sleep for terror. Where, however, the elder children have been properly trained by the parents, such mistakes can not occur, and where they have not, it would require a volume to do justice to the subject.

It is as necessary for those who are much with children, to have right notions about the manner of treating them, as for the parents themselves; it is therefore very desirable that elder sisters should read some of the excellent works which have been written on education. Among these, we would particularly recommend Edgeworth's "Practical Education," Mrs. Hamilton's "Letters on the Elementary Principles of Education," "Hints on Nursery Discipline," a valuable book, republished in Salem a few years ago, and a late French work of great merit, entitled "L'Education Progressive," by Madame Necker de Saussure. These works are as entertaining as

will find no pair of any of these created things exact counterparts to each other, in regard to height, color, structure, figure, or any other essential or accidental property. The animal world is as endlessly diversified. Not only is the distinction between the various genera and species wide and impassable, but between the individuals of each species no perfect similarity exists. Twins are commonly most like each other; but yet we are at no loss to distinguish between them. Even when we take two parts, however apparently alike, of two individuals of the same species, we find the same diversity. The variety observable in the human countenance has long been a matter of remark and admiration. The general features are the same in all; but their color, their relative size, and numerous other peculiarities, are irreconcilably different. Hence we can at once recognise an individual among a thousand, even when they are of the same stature and complexion with himself.

The diversity of color is truly astonishing, and is the source of much beauty and enjoyment. Though the primary colors are only seven, yet these are so mixed and blended over all nature, as to delight the eye with millions of different hues, of all degrees of depth and brilliancy. Let us look at a bed of blowing summer flowers, and behold the ravishing wonders of color. The unstained silvery whiteness of the lily, the deep crimson of the rose, the dark and velvety blue of the violet, the bright yellow of the wallflower and the marigold, are but specimens of the rich and gorgeous hues that delight us with a sense of beauty and variety. The fields and lawns, with their bright green, spotted with white clover and crimson-tipped daisies; the meadows, with their butter-cups, and all their peculiar flowers; the woods, with their fresh spring verdure, and their flaming autumnal robes; and the mountains, at one time bathed in a deep azure, at another shining with golden sunlight, all exhibit the marvellously varied touches of that pencil which none but an omnipotent arm can wield.

This universal variety is not merely a display of infinite skill, but it is equally beautiful, pleasing, and useful. It adds immensely to our enjoyment of nature, and greatly enhances our idea of God's creative attributes. It furnishes us with the means of discrimination, without which the earth would be to us a scene of confusion. Were there only one color, and were every mountain, for example, of the same shape, or every shrub and tree of the same size, how dull and monotonous would be every landscape! And if every human face were exactly alike, how should we be able to distinguish a friend from an enemy, a neighbor from a stranger, a country-

man from a foreigner. Or, to take an example still more impressive, were the powers and passions of every individual mind in every respect similar, that diversity of character and pursuit, which constitutes the mainspring of society and civilization, would not be found. In all this, there is an adaptation and wise design. Amid apparent uniformity, the necessary variety everywhere obtains. And seldom does variety run to an excess. Utter dissimilarity is as rare as complete resemblance. All things are beautifully and usefully varied; but they also all wear the distinguishing mark of the same great Artist, and can all be arranged into classes, the individuals of which bear to one another the most curious and intimate resemblances. There is in nature a uniformity that is as beneficial as variety itself. The leaves, flowers, and fruits, of a tree or shrub, though infinitely varied in their figure and appearance, are yet all so much alike, that they can easily be referred to their parent species. All the animals of a kind have each their peculiarities; but every individual can at once be recognised by the naturalist's practised eye. Thus has the Author of all things so blended variety and uniformity together, as to delight, yet not bewilder us, with exhaustless variety; to enable us to class his works into great groups of genera and species, and thereby to exercise our powers of reason and observation in tracing the delicate resemblances and disagreements that meet us in all our inquiries. O, Lord, every quality of thy works is the result of infinite wisdom! The grand diversities of the seasons, with all their distinguishing characteristics, the beautiful harmony and unlimited variety of nature, alike evidence thy goodness, and demand the cheerful gratitude of man.

NEAPOLITANS ON THE SEASHORE.

WE scarcely know how in words to do justice to the beautiful drawing from which our engraving is made. Reidel, the painter, though a German, has caught the spirit of the scene, and given us a genuine Neapolitan picture. How can we wonder that such mighty schools of painters sprung up in Italy, when its women presented such enchanting models of grace and dignity? Nothing can exceed the felicity of the grouping of the mother and children. Look at the young girl lying at full length along the ground! How, to the life, we see the indolent voluptuousness of her race developing in her form. A true child of the south, she cares not for the bronzing sun,

Or, to take an example, were the powers of individual mind in every diversity of character constitutes the mainspring of nature, would not be found. an adaptation and wise arrangement, the necessary uniformity, the necessary where obtains. And seldom to an excess. Utterly rare as complete resemblance beautifully and usefully all wear the distinguishing great Artist, and can all see, the individuals of another the most curious likenesses. There is in nature as beneficial as varieties, flowers, and fruits, though infinitely varied in appearance, are yet all so easily can be referred to. All the animals of a peculiarities; but every one can be recognised by the eye. Thus has the Amblended variety and uniformity to delight, yet not bewildering variety; to enable into great groups of genera thereby to exercise our observation in tracing likenesses and disagreements in our inquiries. O, Lord, thy works is the result of infinite grand diversities of the most distinguishing characteristics of harmony and unlimited evidence thy goodness and cheerful gratitude of

IN THE SEASHORE.

How in words to do justice drawing from which our Reidel, the painter, has caught the spirit of the genuine Neapolitan picture, wonder that such mighty things sprung up in Italy, when such enchanting models? Nothing can exceed the grouping of the mother and the young girl lying at full length! How, to the life, the voluptuousness of her form. A true child of the sun, not for the bronzing sun,



Neapolitan on the Seashore.

but gazes far out into the lustrous ocean, and watches the white-sailed feluccas, small as the curved wings of seabirds; or still farther stretches her idle gaze to where the shadows of the clouds thwart with long lines of most delicate gray the silver shining sea. The mother bends her head down over her younger child, while she clasps her beads and utters a prayer for the bark which is far away. The sad and gentle music of the sea, spreading its thin tide upon the sand, then singing in its retreat amid shells and agate pebbles, murmurs a fitting undertone to her thoughts.

THE BOUNDLESSNESS OF THE MATERIAL UNIVERSE.

It will be immediately suggested by the intelligent reader that that which is material can not be boundless, and that therefore the title of the article conveys to the mind an evident anomaly; but the fact in plain and simple language is that not only the universe, but every object in nature, as we shall presently show, is boundless in its ramifications. Boundlessness may be considered as synonymous with infinity, and there is perhaps no word suggesting ideas so incomprehensible and sublime as the word infinity; it is a word the meaning of which we can not conceive, and yet our minds crowd on through a vast and airy field of thought, desecrating in the very darkness by which we are surrounded, the scintillations and coruscations of which we are led to dream. And it is because to be immortal is to be infinite that the mind thus walks upon the wind, and visits fields which lie beyond its ken, for it is to give but a circumscribed notion of infinity to suppose that it can belong to Deity alone, or to the eternity in which Deity dwells. It is not sufficiently realized that eternity is one, and infinity is one; the infinite is that of which we can not conceive, the point at which the imagination can never arrive; and yet the infinite may be created; there may have been a time when all with it was darkness, and it may be able to date the moment of its birth, although it never can that of its consummation. We may see a world first launch forth through the fields of space; and if it were given us to know that planet was destined to run an immortal career, to know that after passing through a series of revolutions, each in itself boundless to our eye, it should become materialized—why, because we saw it drink its first beam of glory, because we saw it dart its first fires over the concave of creation, and

pour its first fragrance through the atmosphere—we should not the less regard it as an infinite in the germ, as an immortal in the bud.

And it is when viewed in this light that the universe presents an aspect of unbounded and unlimited creation; as far as the eye of intelligence can glance, it sees matter, and that matter in a state of motion; and if it casts its eye upward it loses itself in a wilderness of worlds, and if it casts its eye downward it loses itself in a wilderness of ages; if it analyze a drop of water it beholds it peopled with forms of life so infinitesimal, that all power of calculation drops the wing and flags in the august attempt to convey the idea of number. But it will be said that properly speaking this does not convey the idea of boundlessness. "Although," it may be said, "imperceptible to us, creation doubtless has a termination; and if our apprehension were greater we might calculate the animalcule which swarm in the drop of water, and the stars which wander through the nebulae;" yet even this is doubtful, it is ground for more than hypothesis; we certainly dare not say that nature is not boundless in its extent. We must measure objects by their ends; and if, after tracing them accurately through a long series of processions and circumstances, we at last lose sight of them in a vast void, which no plummet can fathom, no compass describe, no telescope scan, no chronology date, what is that but infinity! An instance is at hand: let us throw a glance over our globe's unwritten history, let us trace it through all its gradations up to the present time, and what are the conclusions we derive from the facts? We are conducted to a period of wild and fearful grandeur, the reign of darkness and chaos, when the atoms were first congregating which were to form our planet, and attained a state of fixedness, the grosser separated from the more aerial, and thus the earth gained the first stage of its existence; now from that period, when the thunder and clash of contending atoms, struggling with their own gravities, broke the stillness of our system, there has been a constant progressive development of order, and a progressive development of life on our globe: first, when our world was a vast ocean, with no land to margin its streams, we find the trilobite and mollusc moving through the watery depths, and dwelling securely there; the nautilus then by thousands rode the waves, and hoisted their sails, ay, perhaps, more proudly than in our time.

The waters again subsided—our world became then in a more strict sense of the word than now, a terraqueous globe; then the saxonian tribe, those giants of the fell and flood, came forth to run their career; they finished it; and then rose matchless forests, composed

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of the lepidodendron and coriferæ, where
the negatherium and dinotherium roamed; to
these succeeded our present fair green earth,
with its streams intersecting valleys clothed
with corn, and its cascades flashing down from
mountains crowned with snow. And here
man exists with a soul; never have a similar
race of beings before graced the garden of our
world; the world is now in the greenness of
its glory, the freshness of its spring, and these
facts bear out the notion that its career will
be boundless. Destined for final conflagration
it may be, but never for a funeral pile; those
flames will only purge it from corruption,
and make it a brighter and better world.
Ten thousand pent-up volcanoes may belch
forth, and pour their liquid lava over every
portion of our green globe; they will but
etherealize it, they will impart to it an im-
mortality which it bore not before, and make
it a fit residence for beings etherealized, and
as immortal as itself. Thus in destiny, the
material world, if not the material universe, is
boundless. But let us disassociate this view
of the case from the reader's mind—let the
universe stand as it still stands, and it is
boundless—boundless, else show us the walls
which mark the limits of creation! boundless,
else show us the window whence we may
look forth into the depths of non-existence!
boundless, else classify the illimitable ocean-
tribes, and count the "stars which wander
through the upper depths." Boundless! why
every step we take in science tells us of im-
mensity undreamed of before. Let us lay
our hand on any one branch of physical sci-
ence, or natural history, and boundless is the
termination to all our inquiries. The vena-
ble sires of philosophy in every age have felt
themselves bewildered by a glance at nature;
and our higher degree of knowledge has given
to us a thicker shade of darkness. Chymistry,
while it describes to us fifty-four simple sub-
stances, does not forget to tell us that it went
no farther, simply because it could go no far-
ther, and not because there appeared to be an
end of its doctrine. In geology we are darker
still, we wander on through a million of ages,
and seem to gain no point. Nay, what is all
science but a subterranean temple by torch-
light; the brightest coruscations it reflects
serve but to reveal a deeper darkness than we
thought existed before; the ray of light trem-
bles on some ruined pillar. We copy the
hieroglyphic, but we can not decipher it; and
as we wander on through the long temple, col-
umn after column attracts our notice, full of
meaning, but darkness invests them all.

But we must not conceal from ourselves
that discovery and knowledge are light, al-
though they leave many additional doubts and
perplexities upon the mind. The joy which

rushes over the spirit of the discoverer after
his long years of patient study is too great for
him to mark: the darkness from his discovery
only stands out as it were in bold outline.
Philosophers have in all ages been ascending
as it were an inclined plane, and every suc-
ceeding age has left those of the preceding far
behind. If we may quote a noble illustration
from the splendid work of Professor Nichols
on "The Architecture of the Heavens," we
might suppose a North American Indian who
had been buried the whole of his existence in
one wild wood, and had never dreamed of the
existence of other woods, far less of other
lands; yet one day he arrives in the chase at
the foot of a lofty mountain, he ascends it,
and he finds fresh scenes of green glory rush-
ing on his eye; he sees forests stretching all
around him, and wild streams dancing amid
valleys of which he had never dreamed
before; and he stares, and starts with wonder
and amaze. Yet we know that he has seen
nothing, and that what his eye thought so vast
was but a mere speck in the circle of the
world. And are we not realizing the wonder
of the Indian every day? What are our
proud observations but rising knolls (are they
so much in the universe?) whence we can
descry here a stream and there a stream; here
a forest and there a forest, while the vast and
sounding ocean, and the mountain chain, and
nature's more attractive glories are hid from
our eye? We said they were hid from our
eye; but suppose that we were able to per-
ceive all, would not the very vastitude by
which we were surrounded when made so
manifest become painful? If our eyes were
so opened that we could see the atmosphere
which we inhaled or exhaled, crowded with
animal existences; the water we drank teem-
ing with life; if we saw that at every step
we took we crushed millions of insects, would
not our position be horrible? should we not
loathe ourselves and loathe the world? Phi-
losophers would not then see the wisdom in
the economy of creation which they now see;
an awful blindness would settle on the eyes,
and only would they wake to create a shud-
der at the horrible forms by which they saw
themselves surrounded. An idea something
like this seemed to have flitted across the mas-
culine mind of that prince of novelists, Bul-
wer. In his *Arasmanes*, an allegorical tale,
in the second volume of the *Student*, he rep-
resents his hero as having his eyes thus
opened: first to beauty, and second to deform-
ity. The baronet stated that it originated not
altogether in fiction, but from a melancholy
case of hypochondriasis which came under his
own observation in Italy. The patient, a man
of genius and a philosopher, expired under the
impression that he was surrounded by life in

its most horrible forms, entering into the atmosphere he inhaled, and mingling with every circumstance of his life.

But what is the universe? Is it sufficient to describe it as the area of creation—the theatre where God works his manifest marvels in the eyes of all intelligences? The universe is an invisible world; it is haunted through all its extent with things of life; and doubtless there are eyes which see them better than ours. What are the views which open to the inhabitants of the planets? these moons and satellites, what a boundless theme for conjecture, the varied characters, feelings, and emotions, of the dwellers on those immense bodies which roll so far beyond us; but the scene from the smallest, namely, the moon, must be most interesting to ourselves. The earth, to the inhabitants of that body, must seem the most splendid orb in the vast field of creation, with a surface thirteen times larger than she appears to us. They can plainly distinguish our seas, apparently unruffled by storms. They can behold our immense mountains and caverns, and glory in the splendor reflected from our planet, as we joy in the pale rays emitted from theirs.

The universe is boundless. There are many, doubtless, who will think we have laid down an axiom, but by no means logically or mathematically proved it; and perhaps this arises greatly from the fact that there seems no necessity to do so. Why labor out an elaborate essay to prove what every school-boy believed, that boundlessly we are surrounded by evidences of mind. Let the moon be no larger than the shields of our sires, the stars but insignificant somethings which appear to gem the vault of night, and even then the universe to us is boundless; but tell us of laws which rule those stars; tell us that the sun is one million of times larger than the earth, and that the nearest of those twinkling stars, which seem so small, is thirty-two millions of millions of miles distant, and the frame is paralyzed at its own insignificance. The gazer turns from the mighty orbs, wheeling their ponderous forms through space, and shudders and shrinks within himself, horrified at his own puerility in the eyes of the mighty Architect. Nay, O man! shrink nor shudder not; thou art second only to those august and majestic fires, which flash in majesty and roll in might through nature's gloom. Nay, O man! thou art more. O: thy brow is the stamp of eternity, for thou art the image of thy maker, God; and though the stars perform in grandeur their motions, and sweetly sing as they wheel onward in their spheres, thou art more curiously wrought than they, and thy life more curiously sustained than theirs. The hand which first launched them

away; the finger which first gave to them their unalterable law, has never touched them since; they have but one principle to govern them, but one law to guide. But thou, O man! art thy Maker's master-piece. Every gland, every bone, every muscle, attests a special design worthy of a God; nor canst thou breathe unless sixty billions of separate intentions put forth their energies. Thou art greater than a star, O man!

Boundless immensity! whither am I carried? where is the mighty goal, the destination of these awful travellings? Stars can not tell; onward they sweep in matchless myriads, and the gleams reflected on their surface tell of stars beyond them. They are not the goal of boundlessness. Waves can not tell; they roll, and clash, and roar, they ripple at our feet, or thunder on our vessel—images of eternity—they can not tell; we see neither their beginning nor their end.—They are not the goal of boundlessness. Winds! mighty winds! harpers of the mount, and the forest, and the glen, ye shall tell; for often are ye silent, and ye wake no response around ye. No, the winds can not tell; some leaf is always moving, some breeze is always sighing, some tempest is always swelling, to indicate their restless activity, to speak the presence of their power. Winds can not tell;—they are not the goal of boundlessness; and naught in nature can tell, for all is action, all is boundless. No eye hath ever been blinded by the darkness of that part of space where God is not in his works. A void in the universe! it would be at once to say that Deity had expended his machinery, that there was a void in the Divine Mind. Let us allow that there are parts of space unpeopled with the creations of intelligence, and by a very slow process of reasoning, we may reduce the plenipotency which arms the Eternal, to the weakness and imperfection which mark the creature. We can form no conception of Deity, but we know that the majesty of his power has crowded all space with the mighty configurations of his glory. A boundless universe! then there is no such being as an atheist; and here we take up the beautiful idea of that first of modern classical essayists, John Foster, in his important essay on the dearth of Christianity among men of genius. He reasons thus: How can men deny the existence of a Deity unless they have travelled through all space to discover whether he might not have revealed himself? Every record of all time, of every land, must be laid open before the atheist; every planet and star must unfold its history; and if there be other bodies far off in space, governed not by planetary law, and neither planets nor stars, but inhabited by intelligences, their history must be

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known too; and until he knows this, and has
inquired at all these places, whether Deity has
never been known to reveal himself, he is not
at liberty to say there is no God. This idea
has been borrowed and carried out by Doctor
Chalmers, in his Bridgewater Treatise. But
oh! why should we travel so far when bound-
lessness breathes all around, and that bound-
lessness caused by God. Boundlessness is
written in letters of lightning on the black
thunder-cloud—we know not whence it com-
eth nor whither it goeth; boundlessness on
the petals of the flower bowing on its calyx;
myriad veins defy the most intense microscopic
ken; boundlessness in the colors of the rain-
bow, the fires of the aurora, the insect and
the animal tribe, with all their train. The
universe in all the extent of its creation, teems
with boundlessness, and that because God
himself is boundless.

COD-FISHING.

ALTHOUGH I had seen, as I thought, abun-
dance of fish along the coasts of the Floridas,
the numbers which I found in Labrador quite
astonished me. Should your surprise, while
reading the following statements be as great
as mine was, while observing the facts related,
you will conclude, as I have often done, that
Nature's means for providing small animals
for the use of larger ones, and *vice versa*, are
as ample as is the grandeur of that world
which he has so curiously constructed.

The coast of Labrador is visited by Eu-
ropean as well as American fishermen, all of
whom are, I believe, entitled to claim portions
of fishing-ground, assigned to each nation by
mutual understanding. For the present, how-
ever, I shall confine my observations to those
of our own country, who, after all, are proba-
bly the most numerous. The citizens of Bos-
ton, and many other of our eastern seaports,
are those who chiefly engage in this depart-
ment of our commerce. Eastport, in Maine,
sends out every year a goodly fleet of schoon-
ers and "pickaxes" to Labrador, to procure
cod, mackerel, halibut, and sometimes her-
ring, the latter being caught in the interme-
diate space. The vessels from that port, and
others in Maine and Massachusetts, sail as
soon as the warmth of spring has freed the
gulf of ice, that is, from the beginning of
May to that of June.

A vessel of one hundred tons or so, is pro-
vided with a crew of twelve men, who are
equally expert as sailors and fishers, and for
every couple of these hardy tars, a Hampton

boat is provided, which is lashed on the deck,
or hung in stays. Their provision is simple,
but of good quality, and it is very seldom that
any spirits are allowed; beef, pork, and bis-
cuit, with water, being all they take with
them. The men are supplied with warm
clothing, water-proof oiled jackets and trou-
sers, large boots, broad-brimmed hats with a
round crown, and stout mittens, with a few
shirts. The owner or captain furnishes them
with lines, hooks, and nets, and also provides
the bait best adapted to insure success. The
hold of the vessel is filled with casks of va-
rious dimensions, some containing salt, and
others for the oil that may be procured.

The bait generally used at the beginning of
the season, consists of muscles salted for the
purpose; but as soon as the capelings reach
the coast, they are substituted to save expense;
and in many instances, the flesh of gannets
and other sea-fowls is employed. The wages
of fishermen vary from sixteen to thirty dol-
lars per month, according to the qualifications
of the individual.

The labor of these men is excessively hard,
for, unless on Sunday, their allowance of rest
in the twenty-four hours, seldom exceeds
three. The cook is the only person who fares
better in this respect, but he must also assist
in curing the fish. He has breakfast, consist-
ing of coffee, bread, and meat, ready for the
captain and the whole crew, by three o'clock
every morning, excepting Sunday. Each
person carries with him his dinner ready
cooked, which is commonly eaten on the fish-
ing-grounds.

Thus, at three in the morning, the crew
are prepared for their day's labor, and ready
to betake themselves to their boats, each of
which has two oars and lugsails. They all de-
part at once, and either by rowing or sailing,
reach the banks to which the fishes are known
to resort. The little squadron drop their
anchors at short distances from each other, in
a depth of from ten to twenty feet, and the
business is immediately commenced. Each
man has two lines, and each stands in one end
of the boat, the middle of which is boarded
off to hold the fish. The baited lines have
been dropped into the water, one on each side
of the boat; their leads have reached the
bottom, a fish has taken the hook, and after
giving the line a slight jerk, the fisherman
hurls up his prize with a continued pull,
throws the fish athwart a small round bar of
iron placed near his back, which forces open
the mouth, while the weight of the body,
however small the fish may be, tears out the
hook. The bait is still good, and over the
side the line again goes, to catch another fish,
while that on the left is now drawn up, and
the same course pursued. In this manner, a

fisher busily plying at each end, the operation is continued until the boat is so laden, that her gunwale is brought within a few inches of the surface, when they return to the vessel in harbor, seldom distant more than eight miles from the banks.

During the greater part of the day, the fishermen have kept up a constant conversation, of which the topics are the pleasure of finding a good supply of cod, their domestic affairs, the political prospects of the nation, and other matters similarly connected. Now the repartee of one elicits a laugh from the other; this passes from man to man, and the whole *flotilla* enjoy the joke. The men of one boat strive to outdo those of the others in hauling up the greatest quantity of fish in a given time, and this forms another source of merriment. The boats are generally filled about the same time, and all return together.

Arrived at the vessel, each man employs a pole armed with a bent iron, resembling the prong of a hay-fork, with which he pierces the fish, and throws it with a jerk on deck, counting the number thus discharged, with a loud voice. Each cargo is thus safely deposited, and the boats instantly return to the fishing-ground, when, after anchoring, the men eat their dinner and begin anew. There, good reader, with your leave, I will let them pursue their avocations for awhile, as I am anxious that you should witness what is doing on board the vessel.

The captain, four men, and the cook, have, in the course of the morning, erected long tables fore and aft the main hatchway, they have taken to the shore most of the salt-barrels, and have placed in a row their large empty casks, to receive the livers. The hold of the vessel is quite clear, except a corner where there is a large heap of salt. And now the men, having dined precisely at twelve, are ready with their large knives. One begins with breaking off the head of the fish, a slight pull of the hand and a gash with the knife effecting this in a moment. He slits up its belly, with one hand pushes it aside to his neighbor, then throws overboard the head, and begins to prepare another. The next man tears out the entrails, separates the liver, which he throws into a cask, and casts the rest overboard. A third person dexterously passes his knife beneath the vertebrae of the fish, separates them from the flesh, heaves the latter through the hatchway, and the former into the water.

Now, if you will peep into the hold, you will see the last stage of the process, the salting and packing. Six experienced men generally manage to head, gut, bone, salt, and pack, all the fish caught in the morning, by the return of the boats with fresh cargoes,

when all hands set to work, and clear the deck of the fish. Thus their labors continue until twelve o'clock, when they wash their faces and hands, put on clean clothes, hang their fishing-apparel on the shrouds, and, betaking themselves to the forecabin, are soon in a sound sleep.

At three, next morning, comes the captain from his berth, rubbing his eyes, and in a loud voice calling: "All hands, ahoy!" Stiffened in limb, and but half awake, the crew quickly appear on the deck. Their fingers and hands are so cramped and swollen by pulling the lines, that it is difficult for them to straighten even a thumb; but this matters little at present; for the cook, who had a good nap yesterday, has risen an hour before them, and prepared their coffee and eatables. Breakfast despatched, they exchange their clean clothes for the fishing-apparel, and leap into their boats, which had been washed the previous night, and again the *flotilla* bounds to the fishing-ground.

As there may be not less than a hundred schooners or pickaxes in the harbor, three hundred boats resort to the banks each day; and, as each boat may procure two thousand cods per diem, when Saturday night comes, about six hundred thousand fishes have been brought to the harbor. This having caused some scarcity on the fishing-grounds, and Sunday being somewhat of an idle day, the captain collects the salt ashore, and sets sail for some other convenient harbor, which he expects to reach long before sunset. If the weather be favorable, the men get a good deal of rest during the voyage, and on Monday things go on as before.

I must not omit to tell you, reader, that while proceeding from one harbor to another, the vessel has passed near a rock, which is the breeding-place of myriads of puffins. She has laid to for an hour or so, while part of the crew have landed, and collected a store of eggs, excellent as a substitute for cream, and not less so when hard boiled, as food for the fishing-grounds. I may as well inform you, also, how these adventurous fellows distinguish the fresh eggs from the others. They fill up some large tubs with water, throw in a quantity of eggs, and allow them to remain a minute or so, when those which come to the surface are tossed overboard, and even those that manifest any upward tendency, share the same treatment. All that remain at bottom, you may depend upon it, good reader, are perfectly sound, and not less palatable than any that you have ever eaten, or that your best guinea-fowl has just dropped in your barn-yard. But let us return to the cod-fish.

The fish already procured and salted, is taken ashore at the new harbor, by part of

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the crew, whom the captain has marked as
the worst hands at fishing. There, on the
bare rocks, or on elevated scaffolds of con-
siderable extent, the salted cods are laid side
by side to dry in the sun. They are turned
several times a day, and in the intervals the
men bear a hand on board at clearing and
stowing away the daily produce of the fishing-
banks. Toward evening, they return to the
drying-grounds, and put up the fish in piles,
resembling so many haystacks, disposing
those toward the top in such a manner that
the rain can not injure them, and placing a
heavy stone on the summit to prevent their
being thrown down should it blow hard during
the night. You see, reader, that the life of a
Labrador fisherman is not one of idleness.

The capelings have approached the shores,
and in myriads enter every basin and stream,
to deposite their spawn, for now July is ar-
rived. The cods follow them, as the blood-
hound follows his prey, and their compact
masses literally line the shores. The fisher-
men now adopt another method: they have
brought with them long and deep seines, one
end of which is, by means of a line, fastened
to the shore, while the other is, in the usual
manner, drawn out in a broad sweep, to en-
close as great a space as possible, and hauled
on shore by means of a capstan. Some of
the men in boats support the corked part of
the net, and beat the water, to frighten the
fishes within toward the land, while others,
armed with poles, enter the water, hook the
fishes, and fling them on the beach, the net
being gradually drawn closer as the number
of fishes diminishes. What do you think,
reader, as to the number of cods secured in
this manner at a single haul?—thirty, or
thirty thousand? You may form some notion
of the matter when I tell you that the young
gentlemen of my party while going along the
shores, caught codfish alive, with their hands,
and trouts, of many pounds weight, with a
piece of twine and a mackerel-hook hung to
their gun-rods; and that, if two of them
walked knee-deep along the rocks, holding a
handkerchief by the corners, they swept it
full of capelings. Should you not trust me
in this, I refer you to the fishermen them-
selves, or recommend you to go to Labrador,
where you will give credit to the testimony
of your eyes.

The "seining" of the codfish, I believe, is
not quite lawful, for a great proportion of the
codlings which are dragged ashore at last, are
so small as to be considered useless; and, in-
stead of being returned to the water, as they
ought to be, are left on the shore, where they
are ultimately eaten by bears, wolves, and ra-
vena. The fishes taken along the coast, or
on fishing-stations only a few miles off, are of

small dimension; and I believe I am correct
in saying that few of them weigh more than
two pounds, when perfectly cured, or exceed
six, when taken out of the water. The fish
are liable to several diseases, and at times are
annoyed by parasitic animals, which in a short
time render them lean and unfit for use.

Some individuals, from laziness, or other
causes, fish with naked hooks, and thus fre-
quently wound the cod without securing them,
in consequence of which, the shoals are driven
away, to the detriment of the other fishers.
Some carry their cargoes to other parts before
drying them, while others dispose of them to
agents from distant shores. Some have only
a pickaxe of fifty tons, while others are own-
ers of seven or eight vessels of equal or larger
burden; but whatever be their means, should
the season prove favorable, they are generally
well repaid for their labor. I have known
instances of men, who, on their first voyage,
ranked as "boys," and in ten years after were
in independent circumstances, although they
still continued to resort to the fishing-grounds;
"For," said they to me, "how could we be
content to spend our time in idleness at
home?" I know a person of this class, who
has carried on the traffic for many years, and
who has quite a little fleet of schooners, one
of which, the largest and most beautifully
built, has a cabin as neat and comfortable
as any that I have ever seen in a vessel of
the same size. This vessel took fish on board
only when perfectly cured, or acted as pilot
to the rest, and now and then would return
home with an ample supply of halibut, or
a cargo of prime mackerel.

Audabon.

KINDNESS AND CENSORIOUSNESS.

OBSERVATION shows that those persons
who indulge most in a fault-finding, bitter
spirit, always have the most faults of charac-
ter themselves, and are the most deficient in
excellent virtues. A censorious, bitter per-
son, is apt to be one of a narrow and preju-
diced mind, not liberalized by extensive ac-
quaintance with men or things, and generally
self-conceited, contemptuous, and positive, just
in proportion to his own littleness of mind and
personal unworthiness.

A truly great mind, or a great heart, is never
contemptuous or scornful, or bitter against
others, but has always too much knowledge
or too much goodness for that, or both, and
too intimate an acquaintance with self and
personal frailties, to allow of the tongue's
dwelling censoriously upon the faults of others.
When Goethe was already an old man, he

said: "As I grow old, I become more lenient to the sins of frail humanity. The man who loudly denounces, I always suspect. He knows too much of crime, who denounces a fellow-creature unheard—a knowledge which can only be obtained by criminality itself. The hypocrite always strives to divert attention from his own wickedness, by denouncing unsparingly that of others. He thinks he shall seem good, in exact ratio as he makes others seem bad." We may treasure up such remarks of the follies or vices of our neighbors as may be a constant guard against our practice of the same, without exposing the reputation of our neighbor on that account.

Those who are truly kind and noble by nature, like the truly modest and pure, are most likely to think others so likewise; whereas, the naturally mean, vulgar, and immodest, are apt to charge others with being so, just in proportion as all that they have of nobility or modesty is counterfeit. They seem to forget that while to the pure all things are pure, the calling of attention to an immodest thing or speech is far more immodest than the thing itself, and that commenting upon an indelicacy and so making it noticeable, is itself the most highly indelicate.

It is an old proverb, that whom you injure you hate, and it is indeed true that a man is far more likely to become an enemy to one whom he has injured, than to one that has injured him. So, to be seen by another in a humiliating position, or in a fit of ill temper or sensuality, will ever after make that person an enemy to the one that is so unfortunate as to have been a witness to his weakness or misconduct, such is the vice of human nature, as exhibited in some characters.

On this principle it is that Borrow says of Portugal, in his book entitled "The Bible in Spain," that "the English, who were never at war with Portugal, who have fought for its independence on land and sea, and squandered blood and treasure in its defence, and always with success; who have forced themselves, by a treaty of commerce, to drink its coarse and filthy wines, which no other nation cares to taste, are the most unpopular people that visit Portugal. The French have ravaged the country with fire and sword, and shed the blood of its sons like water; the French will not buy its fruits, and they loathe its wines, yet there is no bad spirit in Portugal toward the French. The reason of this is no mystery; it is the nature, not of the Portuguese only, but of corrupt and unregenerate man, to dislike his benefactors, who, by conferring benefits upon him, mortify in the most generous manner his miserable vanity. There is no country in which the English are so popular as in France; but though the French

have been frequently roughly handled by the English, and have seen their capital occupied by an English army, they have never been subjected to the ignominy of receiving assistance from them." There is both philosophy and truth to nature in this, as applicable to the relations of nations as of individuals.

THE HAMMER.

THE hammer is the universal emblem of mechanics. With it are alike forged the sword of contention, and the ploughshare of peaceful agriculture, the press of the free, and the shackle of the slave. The eloquence of the forum has moved the armies of Greece and Rome to a thousand battle-fields, but the eloquence of the hammer has covered those fields with victory or defeat. The inspiration of song has kindled up high hopes and noble aspirations in the bosoms of brave knights and gentle dames, but the inspiration of the hammer has strewn the field with tattered helm and shield, decided not only the fate of chivalric combat, but the fate of thrones, crowns, and kingdoms. The forging of thunderbolts was ascribed by the Greeks as the highest act of Jove's omnipotence, and their mythology beautifully ascribes to one of their gods the task of presiding at the labors of the forge. In ancient warfare, the hammer was a powerful weapon, independent of the blade which it formed. Many a stout scull was broken through the cap and helm by a blow of Vulcan's weapon. The armies of the Crescent would have subdued Europe to the sway of Mohammed, but on the plains of France their progress was arrested, and the brave and simple warrior who saved Christendom from the sway of the Mussulman was named Martel—"the hammer." How simple, how appropriate, how grand—"the hammer." The hammer is the savior and bulwark of Christendom. The hammer is the wealth of nations. By it are forged the ponderous engine and the tiny needle. It is an instrument of the savage and the civilized. Its merry clink points out the abode of industry—it is a domestic ditty, presiding over the grandeur of the most wealthy and ambitious, as well as the humble and impoverished. Not a stick is shaped, not a house is raised, a ship floats, or carriage rolls, a wheel spins, an engine moves, a press speaks, a viol sings, a spade delves or a flag waves, without the hammer. Without the hammer civilization would be unknown, and the human species only as defenceless brutes, but in skilful hands, directed by wisdom, it is an instrument of power, of greatness, and true glory.

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ANCIENT USE OF ELEPHANTS IN WAR.

THE military history of elephants com-
mences with the invasion of India by Alex-
ander the Great; the battle fought by Porus
is the first well-authenticated account of their
use in war. Thenceforward we find them
used by the successors of Alexander, particu-
larly the Ptolemies and the Seleucids. An-
tipater introduced them into Greece, and
Pyrrhus transported them into Italy. The
elephants used by these princes were of the
Asiatic race (*Elephas Indicus* of Cuvier), but
the Carthaginians and Numidians about the
commencement of the Punic wars, began to
make a similar use of the African elephant
(*Elephas Capensis* of Cuvier), which differs
from the other, by having less size, weight,
and strength, but longer ears and tusks.

What may be called the military qualifica-
tions of the elephant, are his size, his strength,
his docility, his power of swimming, and the
toughness of his skin, which in most places
was impenetrable to the weapons of ancient
warfare. It must, however, be observed, that
the strength of the elephant, though great, is
not at all proportionate to his magnitude.
The ordinary pictures of ancient battles, in



which elephants are represented bearing huge
towers, crowded with armed men, are ludi-
crous exaggerations; the most that the animal
could carry is a *houdah* with from four to six
persons, and even this weight could not be
sustained on a long march; the *houdah* was
expressed by a Greek word which literally
signifies "a little cuirass," but is sometimes
used by military writers for the hurdles or
wicker work employed in the construction of
field-works. The passage of Silius Italicus,
which has led to the exaggerated notion of
these towers is merely descriptive of the ex-

cessive alarm which would be excited in an army seeing such a spectacle for the first time :—

"High on his back the soldiers saw, amazed,
Embattled towers and threatening forts upraised;
The pinnacles, ascending to the clouds,
Shake as he moves and threat to crush the crowds."
Punica, ix.

This is just such an exaggeration as we find in the Hindoo poem translated by Wilkins in the Asiatic researches: "His elephants moved like walking mountains, and the earth, oppressed by their weight, crumbled into dust."

M. Armandi, in his work on "The Military History of Elephants," to which we are indebted for much of the information contained in this article, justly remarks that elephants and war-chariots were used in ancient warfare for purposes analogous to parks of artillery in modern times. In the battle of the Hydaspes, Porus employed his elephants to cover his centre and left wing, believing that his right was sufficiently protected by the river. According to Polyænus he committed the fatal error of placing his elephants so close together, that they prevented him from making any change in his lines; consequently, when Cæsar charged through his right wing, and attacked his centre in flank and rear, the Indians, kept back by the elephants in front, and pressed hard by Cæsar in the rear, became a helpless mass of confusion. Porus tried to remedy this disaster by ordering his elephants to charge the phalanx which formed the Macedonian centre; but the Greeks having room to manœuvre, attacked each elephant with a separate detachment of light troops, Alexander having selected picked men, armed with sharp axes and crooked swords for the purpose, who were taught to aim at the trunks and throats of the elephants. The animals were finally driven back, and thus any new formation of the Indian lines was effectually prevented. In this instance, then, it may be said that these cumbrous animals caused the defeat of the Indian army, by rendering its lines immovable, after they had been once formed.

Elephants being used as a covering force, were usually stationed in the front of the lines, the intervals between them being occupied by divisions of light troops, who had to prevent the enemy from turning the elephants back upon their own ranks. Some leaders were so much afraid of the elephants being turned that they kept these animals in reserve, and only brought them up to turn the doubtful scale of victory. It was thus that Pyrrhus won the battle of Heraclea. The Roman cavalry were cutting lanes through his columns when he brought up the elephants; the Latin horses were more frightened than their riders

at the unusual sight, the squadrons fell back on the legions, and threw them into disorder. Pyrrhus seized the decisive moment to charge at the head of his Thessalian cavalry, "and the red field was won."

A curious circumstance corroborates the assertion of Florus, that elephants were previously unknown to the Romans; they called the animals "Lucanian oxen," the battle having been fought in Lucania, and this was the name usually given to the elephant by Latin writers, down to the Augustan age. The battle of Asculum was remarkable for two circumstances, which have been omitted by nearly all the modern writers of Roman history: the legionaries had so far recovered from their fear of elephants, that a centurion, named Minucius, attacked one of these beasts single-handed, and cut off a large portion of his trunk. The second incident is that the Romans borrowed war-chariots from the Gauls as a counterpoise to the elephants of Pyrrhus, but never used them except in this battle.

Minucius was not the only hero who ventured singly against an elephant; a more noble instance of devoted heroism is recorded in the history of the Maccabees, at the battle of Bethzacharias: "Eleazar, surnamed Savaran, perceiving that one of the beasts, armed with royal harness, was higher than the rest, and supposing that the king was upon him, put himself in jeopardy, to the end he might deliver his people, and get him a perpetual name; wherefore he ran upon him courageously through the midst of the battle, slaying on the right hand and on the left, so that they were divided from him on both sides, which done he crept under the elephant, and thrust him under, and slew him, whereupon the elephant fell down upon him, and there he died."—1 Mac. vi., 43-46. On this narrative it may be remarked, that the words rendered "royal harness," properly signifies "a royal houdah;" and that the thirty-two men said in a preceding verse to be united with the *mahout* in the charge of each elephant, include not only the warriors in the tower, but also the soldiers who had the charge of protecting the unwieldy animals from the skirmishers and light troops of the enemy.

Pyrrhus was indebted to his elephants for his victory at Heraclea, but these same animals caused his utter ruin in the battle of Beneventum. Curius Dentatus had trained a body of archers to shower burning arrows on these animals, which sticking in their flesh, burned through their thick skins, and drove them mad with pain. No animal is more ferociously destructive than an infuriated elephant; even in the domesticated state, they are known to be gratified with carnage, and hence they have been frequently employed as



Elephants destroying Captives taken in War.

executioners by the despots of the East. One of the Epirote elephants, furious from pain, shook off his driver, and rushing back upon the phalanx which Pyrrhus had formed with closer ranks than usual, crushed and destroyed a great number of soldiers before any remedy could be found for such a disaster. On a previous occasion the delight of the elephant in carnage had been fearfully demonstrated; before the body of Alexander was laid in the tomb, three hundred of his bravest companions were crushed to death by elephants, in the presence of the entire army, by command of the regent Perdiccas. Arrian says that this sickening massacre was rendered the more revolting by the trumpeting, roaring, and other signs of savage delight, which the animals exhibited while engaged in the work of slaughter.

The military value of elephants was best tested in the second Punic war. Hannibal attached more importance to these animals than any cotemporary general, and he certainly made a more skilful use of them than any great captain of antiquity. At the battle near the river Trebia, Hannibal charged and routed the Roman cavalry with his elephants;

but the infantry stood firm against these animals, and even drove them back on the CARTHAGENIAN lines. We are told that the legions were encouraged to this resistance by the example of Fibrenus. The incident is well told by Silius Italicus; and as this most prosaic of historical poets is rarely read by English students, we shall venture to translate the passage:—

“ Fresh horrors now are added to the fight,
The fearful elephants appear in sight;
They gain the bank, they rush into the stream,
High o’er the wave their spear-fenced turrets gleam;
The Trebia trembles at the sudden shock,
As if invaded by some monstrous rock,
Which, torn by tempest from some mountain’s head,
Choked up the stream, and drove it from its bed.
But valor rises under adverse fate,
And dangers still excite the truly great;
Fibrenus, only anxious that his name
Should live recorded in the rolls of fame,
Shouts, ‘Thank thee, fortune!—underneath the wave,
Thou didst not give me an unhonoured grave;
My deeds are seen, and here on land I try
What force the Roman falchion can defy,
Or what the monster is that must not fear
The Latin javelin and Tuscan spear.’
He spoke, and eager sought some tender part,
Then at the monster haried his rapid dart;
Right to the eye the weapon held its way,
Tore through the ball, and quenched the visual ray;

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Army on a March, with Elephants.

The horrid beast sent forth a fearful roar,
Which echoed wildly round the blood-stained shore.
Then, blind with rage, and maddened by the pain,
He threw his driver helpless on the plain,
And fled amain. The Romans at the sight,
Receive fresh courage, and renew the fight;
They press the monster with incessant blows,
From gaping wounds his blood in torrents flows;
Arrows and darts are quivering in his hide,
Till one wide gash extends along his side;
A bustling forest on his back appears,
Of waving javelins and of deep-driven spears;
Worn out at last, the dreadful monster reels,
And seeks the river as his death he feels:
He falls—the mighty ruin chokes the flood,
And the clear stream runs crimson with his blood."

Punica, iv.

According to Polybius, whose authority is incidentally confirmed by Juvenal, Hannibal lost all his elephants but one in this battle, and did not receive a fresh supply until after his victory at Cannæ. Hanno joined him at Capua with forty elephants and four thousand Numidian cavalry, but this reinforcement did not enable Hannibal to pursue his career of conquest. He was defeated at Nola by Marcellus, with a loss of four elephants killed, and two taken; he met a similar loss at Grumentum; two of his elephants were killed in the unsuccessful attempt to relieve Capua, and five more were slain at the battle of Camisium. At the battle of the Metaurus the elephants were repulsed by the pikemen of the eleventh legion, four being slain on the spot, and the rest driven back on the Carthaginian lines.

But the most remarkable example which can be cited of the use of elephants during this period was presented at the battle of Zama, where Hannibal covered his line with no less than eighty of those animals. Scipio immediately changed the usual order of Roman lines; he left wide spaces like lanes between

the manipuli of the legions, masking this arrangement by throwing forward a cloud of skirmishers and light troops, principally Numidian cavalry furnished to them by Massinissa. Hannibal, annoyed by the skirmishers, ordered his elephants to charge the Roman lines in a body, and the skirmishers retreated through the lanes or passages left open by the formation of the legionaries. The elephants pursued, and the moment one of those animals was engaged in one of the passages his doom was sealed; on either side were the pike-men, whose serried weapons could not be beaten down, while the light troops attacked the animals with spears, javelins, crooked swords, and battle-axes. The chief danger arose from the cavalry; the Italian horses could not be got to face the elephants. Scipio, however, promptly set the example of dismounting, and after a fierce straggle the elephants were all *hors de combat*. Eleven of these animals were taken alive by the Romans; all the rest fell in action.

This battle taught the Romans the advantage of an open formation of the lines in a contest with elephants, and in some degree proved the inutility of these animals when sent against disciplined troops. Thenceforward the use of these animals in war declined, and they are mentioned for the last time in the military history of Rome at the battle of Thapsus, where Julius Caesar overthrew the last army of the republic and its African auxiliaries. All the accounts of this battle which we possess are so imperfect, that it is not easy to determine how Juba employed his elephants; but that the victory over them was deemed very important is manifest from the frequent appearance of the elephant on the coins and medals of the Julian family.



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The neglect of elephants in the western world after the battle of Thapsus became an established principle; both Livy and Arrian speak of them as utterly contemptible for the purposes of war; but in the east the use of them was revived by the princes of the house of Sassan, and they were employed in the wars of India so late as 1779; Hyder Ali having sent his elephants to charge the disordered lines of the unfortunate Baillie. In the eastern wars, not less than in those of the west, elephants have proved an uncertain and dangerous support; thus when the Portuguese were attacked at Colombo in 1520, the elephants sent against them by the Cingalese, daunted by the fire of the harquebusses and maddened by wounds, turned back upon their own lines, and crushed to death whole troops of unfortunate islanders. Some of the emperors of Delhi mounted light guns on the backs of elephants, but the slow movements of the animals prevented this kind of artillery from being generally adopted. In our day, elephants are chiefly used for the transport of ordnance and heavy stores; and many are of opinion that even for this purpose they are inferior in value to horses.

LECTURES ON ASTRONOMY.—No. 2.

BY PROFESSOR O. M. MITCHELL.

I have stated in the preceding lecture the fact that the science of astronomy has furnished to the human intellect the wildest and noblest field for its efforts. I propose to direct your attention, in this lecture, to specific objects. Follow me, then, if you please, through the history of the developments of discoveries made with reference to our nearest neighbor—the moon.

The early history of science we know is lost. We may trace back the record of its movements until we see that there was a science of astronomy anterior to the earliest date which history can reach. We may then take up tradition—stepping still further back—and there again we stop and ponder upon the fact that there was a science of astronomy anterior even to tradition. Thus we are lost in the obscurity of past time, and, having nothing more to guide us upon which we can rely, we must resort to speculation. But let it be remembered that this speculation is of such a character that it is absolute certainty, and if it be properly conducted, it will lead us to results entirely reliable. I shall be obliged, then, to begin with speculation.

In turning the eye to the heavens, the

strong probability is that the very first astronomical observations made upon any moving body were those made upon the moon. This attracted the wondering gaze of every eye—its curious and extraordinary changes, and the rapidity of its movements, were so different from those of any other heavenly body. While the sun was ever bright and round—while the other planets always shone with a serene and steady light—while the fixed stars shed forth the same unvarying degree of splendor year after year, it was found that the moon was constantly changing. On one evening it was observed to be the slender silver crescent, close beside the sun; it was watched from night to night, receding from a line with the sun, and increasing in brilliancy, till, finally, it was found to rise in the east, in full orb, while the sun was sinking in the west. Then, as the nights rolled on, the light was discovered to decrease, until, when it again came round in conjunction with the sun, it had entirely disappeared. These changes were doubtlessly the first observed.

But there was another point which early attracted the attention of man. When the grouping of the stars in the heavens had first been made—when it was seen that they held invariable relative positions to each other, the next point was to watch and see if the moon held its place among the stars. Here arose a most wonderful discovery. The moon did not hold its place among them. What did it do? It was found, in the next place, to be moving contrary to the motion of all the heavenly bodies, which appeared to make regular diurnal rotations. The moon was heaving upward, while at the same time it had a general diurnal motion. Here was the first discovery ever made with regard to the movements of the heavenly bodies.

For a long time it must have been a matter of perplexity whether this motion of the moon was real, or was occasioned by the fact that the whole sidereal heavens were sweeping past the moon. How is it possible to determine this question? If they had only this object to examine and no other moving bodies were found, then would it have been impossible to have settled the question whether this motion actually belonged to this object alone, or whether the whole sphere of stars wheeled round more rapidly than the moon.

But after a little while they found that the sun in like manner partook of a similar motion. They watched the setting sun. How many of us have done the same thing, for the like purpose? They saw certain bright stars first making their appearance, apparently near the sun, as it sunk to rest. Night after night they watched, and found to their astonishment that these broad groups of stars were coming down-

ward to meet the sun, and at every successive day they were nearer and nearer that luminary. The sun is heaving upward, said they, to meet the stars, as they are sinking down under the horizon; and inasmuch as this phenomenon did not differ from that of the moon, it settled the question at once and for ever, that the motion of the moon and the sun was really in no sense belonging to the heavenly bodies among which they appeared to be located. Here, then, was a second grand discovery—the movement of the sun.

But as they continued these examinations they had occasion to refer the sun to a very brilliant beautiful star, that was found to be visible to them after the sun's setting. This was regarded as a fixed star among the rest; but, by continuous examination, it was found this star was moving downward to meet the sun. It did not hold its place among the rest. What could be the meaning of this? He who first fixed his eye comprehendingly upon this object, how intense must have been his emotions! What is this, hitherto regarded as a fixed star? He watches it till finally it is lost in the splendor of the sun. What now? It has been found that all the bright stars among which the sun appears, move upward in the east in the morning just before the sun rises. Might it not be that this star will pass by the sun and make its appearance in like manner? We can imagine this individual, morning after morning, with his gaze fixed on the eastern sky, watching the reappearance of his lost star. At length it is found: there it is, on the other side of the sun!

Here, then, is the first discovery ever made of a planet by the human eye. Who discovered it? Alas! his name—his country, is for ever lost. But we know this to have been the process. Having found one of these moving bodies, it was not difficult to find others. But it is unnecessary to go into an explanation of the manner in which other planets were discovered, and I will revert to the moon. Up to this time no explanations of the changes of the moon were divined—it was impossible to divine them.

Another phenomenon, more wonderful, more terrific than all, now came to impress itself upon the mind and awake its energies: it was the exhibition of a solar eclipse. No eye, even at this day, has ever gazed upon this startling scene without experiencing a sense of awe or fear. The idea that the great source of light is waning—is dying—is passing away from the heavens, always chills the blood and fills the mind with terror. What, then, must have been the effect produced upon the minds of the early inhabitants of the earth by this phenomenon—while the causes which produced it were unknown, and it was

impossible to predict its coming—when, at the noon of a gorgeous and sunny day, it presented itself to their astonished gaze! Surely, we may imagine that, after such a startling phenomenon, the most powerful intellects were consecrated to the investigation of this mystery.

Now, I shall venture to attempt an explanation to go far enough to show to you how it was that the first eclipse was predicted, so that you yourselves can, with the eye alone, make the requisite observations and attain sufficient knowledge to be able yourselves to predict the coming of such an event. This may seem very difficult—and it is marvellous, even now, with all the aid of astronomical tables, and all the knowledge we have derived from the storied past. How it could have been done thousands of years ago, when the true knowledge of our system did not exist, is most remarkable and entirely inexplicable. Let us examine into this matter.

In the first place, the attentive eye marked the fact that when an eclipse of the sun occurred, no moon was visible. This was a very important point; and, aroused by the discovery of this fact, they watched the movements of the moon and marked its position before the coming eclipse. The next night after the eclipse they found the moon close to the sun—a silver crescent, actually located in such a manner that if it pursued its wonted orbit it must have passed very near the sun at the very time the eclipse took place. The moon was last seen on this side—immediately after the obscuration it occupied the other side. They joined these two points, and by the rate of motion of the moon calculated how long it took for the moon to come up to a junction with the sun, and it was found to be just such as to allow the moon to come in conjunction with the sun at the very time of the eclipse. Hence they reached the conclusion that the moon was passing between the eye of the observer and the sun, and in that manner the light of the sun had been intercepted. Here was an explanation of the extraordinary phenomenon of a solar eclipse.

But how was it possible for them to calculate the return of an eclipse? This will require more attention. I beg you to remember that we have no history going back sufficiently far to record this wonderful discovery—even tradition knows nothing of it. We must then go back in imagination, and speculate concerning it.

First, then, it was remarked that the track pursued by the sun and the moon among the fixed stars was circular. Now if it were possible for me to mark out the track of the sun in the heavens—if it would, for our ac-

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breadth to its diameter—if the moon in like
manner should leave the mark of its track,
these two belts would not coincide, but would
cross each other in two opposite points.—
These are what are called the *nodes*. You
will understand what follows without diffi-
culty. Now, in order that it should be possi-
ble that the eclipse should take place, you
will readily perceive that it was necessary,
not only that the moon should be in conjunc-
tion with the sun, but it must actually cross
the track of the sun when in conjunction, in
order to make an eclipse. The moon must
be in one of these nodes or an eclipse can not
take place.

But again, it has been already observed that
an eclipse can not occur except at new moon.
Combine these two facts. If it should so hap-
pen that the new moon should come in just at
the instant it was crossing under the disk of
the sun, then would the moon interpose itself
between the eye and the sun and an eclipse
would necessarily occur.

Now then, to find out that period: let us
go, in imagination if you please, to the top of
some mountain peak, where the first astron-
omer—immured from the world—carries on
his nightly observation. He had reached to
the knowledge of the fact that there will be
an eclipse of the sun if the new moon occur
at the time she is in her node. He already
knows the time for the new moon to come in,
which is fixed and certain. He believes he
can compute the time when the next node
will come round, and to do it he seizes the aid
of the moon to-night. He runs onward till
he finds when the new moon will appear, and
discovers that when it comes round it is not
in the act of crossing the sun's path. He
runs round another cycle and finds again that
it is not on the sun's track. He extends his
investigations still farther from one lunation
to another—he finds that the new moon ap-
proaching nearer and nearer to the desired
place, till finally it comes exactly to this
point. The computation is marked. "There,"
he says, "when that day arrives, I announce
to the inhabitants of the world that the sun
shall lose its light."

With what anxiety he must have watched
the coming of that day! How slowly did
the revolving moons pass by! At last the
day arrives—he retires to his rocky summit,
there to await the test of his triumph or his
defeat. The sun rises, bright and beautiful
—it mounts the heavens, and scatters glory
in its path. While the mortal world below
are engaged in the avocations of business and
the pursuits of pleasure, he is watching with
intense anxiety to know what the result will
be. But in the very noon of the day his tri-

umph arrives. The sun begins to fade—it
waned—it dies! The terror-stricken millions
below cry with agony; while this lone man,
on his bleak and barren watch-tower, with
out-stretched arm offers his thanks to the God
of the universe who has crowned his efforts
with success.

But, alas, for human fame! Surely *that*
individual might have hoped to believe that
he who had first predicted the coming of an
eclipse, who had removed the causes of ter-
ror which this phenomenon had spread among
the inhabitants of earth, should have his name
engraved upon the tablet of Fame "with a
pen of iron and the point of a diamond." Yet
his name, his nation, is lost for ever! No his-
tory reaches so far back—no tradition can ex-
tend to the point of time when he lived, or
where.

Now, by a most remarkable and wonderful
arrangement of the lunations, on the return
of the new moon it is found that, after we
have predicted one eclipse, if we go on and
record each successive eclipse for the period
of between 18 and 19 years, at the end of the
cycle of 223 years they will have run round
what might be called an orbit, and again oc-
cur on the same days. Hence, after they had
recorded eclipses for one such cycle, there
was no difficulty in predicting an eclipse at
any future time. The coincidence, however,
is not exact. For, if an eclipse occurred on
the 19th of March, 3,000 years ago, the suc-
cession of the cycle may in the course of time
wear gradually around and disappear; but
many years must roll away before, on the re-
currence of the cycle, an eclipse will not take
place.

As soon as it was possible to understand
the cause of the eclipse of the sun, the human
mind was directed to the investigation of the
cause producing an eclipse of the moon. This
was far more difficult, and for this reason:—
In the eclipse of the sun they had watched
the coming up of the moon to the sun, its
passage across the sun's disk, believing with-
out question that the eclipse was caused by
its interposition between them and the sun,
and that it occurred only at new moon. But
what was to interpose itself between the be-
holder and the *full* moon? There seemed to
be nothing in the heavens. Upon reflection,
the human mind bethought itself that every
body which revolves in the light of another
luminous body, will cast a shadow beyond in
a right line with the light itself. Now if the
earth is opaque, it might intercept the light
thrown upon it from the sun, casting a shadow
toward the horizon, and might it not be pro-
jected far enough to reach the moon itself, so
that the moon in passing into the shadow,
having no light of its own, would be obscured?

Here is an explanation of the cause of the lunar eclipse, revealing to the early astronomers the fact that the moon was not self-luminous.

The explanation of the phases of the moon is easy. If it be a globe, or sphere, and only brilliant in consequence of the reflection of the light from the sun, it became necessary that the illumination should always be at the time when the moon and the sun were in contrary positions relative to the earth. When the sun was setting and the moon was comparatively near the sun, and, of course, between the observer and the sun, it was impossible to see the whole illuminated surface of the moon, and indeed sometimes almost none at all. But as the moon gradually receded from the sun, night after night, after a time it came to occupy an easterly position, when the light of the sun falling upon its surface was thrown back at a very acute angle upon the eye of the observer, and the full moon was presented. These changes were going on from lunation to lunation, and, once observed, were easily comprehended.

While the moon thus revealed to them the causes of the eclipse of the sun, and the reason of its own phases, it also revealed to the early astronomers the figure of our earth. How did this occur? It was found, when the moon passed into the shadow of the earth, that the line cut out on the disk of the moon by the shadow was an arc of a circle, and as it passed further and further on, even to the entire obscuration of the moon, it still appeared in a form nearer a complete circle. Now it was impossible that any other than a globular figure should cast such a shadow upon the surface of the moon. The moon, then, first revealed the figure of the earth upon which we live; and, strange to tell, that same moon, in our own day, has given us a more perfect knowledge of the figure of the earth than can be derived from any measurements with the most accurate instruments we yet possess.—This matter I shall undertake to explain hereafter.

We find, on running back to past history, that observations were made upon the moon, at Babylon, 2,250 years before the Christian era. And these observations, upon the taking of that city by Alexander, were said to have been presented to Aristotle. The truth of this we can not know; but one thing we do know—that on the 19th of March, 2,567 years ago, there was an eclipse of the sun observed and recorded in the tower erected in that mighty city: on the 8th of March in the following year there was another; and on the 4th of September in the next year there was another. And we know and understand the peculiarities belonging to these antique observations.

These are, perhaps, among the earliest observations—and of such importance are they in linking the past with the present, that but for them we would at this time be comparatively ignorant of the movements of that wondrous orb which does more for the civilization of the world than any other one thing of which we have a knowledge. I pronounce this to be true without hesitation. If it were possible, now, to trace with perfect precision the exact position of the moon, we should accomplish more for commerce; for science, for civilization, than could be done in any other way. Why? Because then the tempest-tossed mariner upon any ocean—over whom days and weeks had passed without his seeing the sun or stars—the moment this silver orb made its appearance again in the heavens, would be able with perfect confidence to exclaim: "I know exactly in what part of the globe I am situated; the smallest observation gives me my latitude, and the position of the moon my longitude." Hence, I say, it is of the utmost consequence that we should have these old observations; for by linking them with those now making, we are able to approximate to the accomplishment of this grand design more fully.

But as we come down through the tide of time, we find a particular theory adopted with regard to the whole system with which we are united—the old Greek theory, to which I will just advert. It located the earth in the centre, and made the moon the nearest object, and the sun next. Now it happened, curiously enough, that there was one truth in the theory: the moon did revolve about the earth.

When Copernicus presented his theory, and transferred the fixed centre to the sun, causing the planets to take proper positions, rescuing the earth from its false position and sending it revolving round the sun, the question was, what is to be done with the moon? There seemed to be a difficulty here. The query was: is the moon a planet like the rest? Perhaps many of my audience have not thought of this. How many of us have asked the question—"How do we know that the moon revolves?" Because the books tell us so? We are generally in the habit of receiving facts in that way. I do not remember ever to have seen an explanation of this in any book. But Copernicus reasoned in this way. Said he: I do not believe the moon revolves in an orbit interior to the earth's, because I find that evinces a miracle; the moon in that case should never leave the sun but to a limited distance. Now the moon does leave the sun, and moves off till it is directly opposite, and then comes around again up to the sun. I therefore say it does not revolve interior to the earth's orbit. In the next place,

it does not revolve exterior to the earth's orbit; for I find the motion of all the planets exterior to the earth, at certain points of their career becomes slow—it is arrested—they stop—retrograde—they stop again, and then take up their onward motion. Now I understand why it is that we, being on the surface of a circular globe must have these changes exhibited to us. But the moon never stops and retrogrades—it is ever moving onward, and therefore is not exterior to the orbit of the earth.

Here was a further absolute demonstration. It could not be either interior or exterior—therefore it was *no planet at all*. Now the phenomena exhibited by the moon were perfectly accounted for. If—upon the hypothesis that you make the earth its centre—it revolves about the earth, it is our satellite, ever accompanying us in all our movements.

But we come down still further in the history of our neighbor. When Kepler discovered the two laws of planetary movements—that they revolved in orbits not exactly circular, but a little elongated—elliptical as they are called; when, in like manner, he had discovered, by tracing them up, that a line drawn from the sun to any of the planets always swept over equal areas of space in equal times—and when, at the end of seventeen long years of toil, he had also discovered his last great law, which linked all these isolated planets into one grand unit, making the sun always the centre, it seemed that nothing more remained to be done. But immediately the question arose: what holds these mighty globes steady? What power reaches out to them and prevents them from breaking from their orbits and wandering away into the blackness of darkness? The resolution of this problem was reserved for the immortal Newton. Kepler himself gathered some faint glimmerings of the great cause—that there was a power of attraction existing in bodies, mutually operating upon each other; but he did not attain to the demonstration of this fact. This was reserved for that great man to whom we owe our knowledge of the laws of attraction.

Here, if you will allow me, I will attempt to explain the manner in which Newton conducted the argument which led him to the grand result. I am confident that although there are many here who have given comparatively little attention to astronomical science, they will be able to follow me readily in this explanation. Newton began where Kepler left off. The latter announced that bodies were attracted to each other, and by a force which he believed decreased according to a certain fixed law: and it was to prove this that Newton made his investigations.

In the first place, he announced this as a law, according to his belief: that everybody attracts every other body by a force which varies inversely as the square of the distance. If a body be located at a distance *one*, the force of its attraction we will call *one*. Now remove this body as far again to a distance *two*, and the attractive power will be *one fourth*—at a distance *three*, *one ninth*, and at a distance *four*, *one sixteenth*; and you can carry out the law to any distance.

Now, to prove the truth of this law was the question. In the first place, it is manifest that, whatever be the law of attraction, it will be clearly and positively determined by the amount of velocity it is capable of impressing upon a falling body. This is intelligible to all. If from this point I let fall any object toward the earth's surface, under the influence of the force of attraction suppose it fell sixteen feet in the first second of time—this sixteen feet will measure the force of attraction at the earth's surface. If it were possible to go 4,000 miles high, and from that point, as remote from the surface of the earth as my first station at the surface was distant from the centre, and then drop a body, measure the space through which it falls, and find it to be one fourth of sixteen feet in a second, this would be proof that the law was true. But suppose I rise still higher, 12,000 miles above the centre of the earth, and there find the space through which this body falls is a ninth part of sixteen feet in a second—here is another confirmation of the law. And if, as I increase my distance every time by the radius of the earth's circumference, I find the same law holds true, I pronounce, without hesitation, that this is the law of attraction.

But I can not rise in this way, to a distance of twelve, eight, or four thousand miles. Yet may I not carry my observations to a certain height? Yes; but to such a comparatively small distance that the difference will be inappreciable. Alas, for the person who undertakes the experiment! such is the minute difference, even when he has attained the greatest height ever attained by man, it can not be appreciated.

What then was to be done? No one could ascend above the earth to perform these experiments. But the mighty intellect of Newton stretched still further, and our old friend, the moon, was brought in to play the part of this falling body! What! do you ask—is the moon falling toward the earth, and does Newton seize it and stop it, and then compute with what velocity it should come toward its central planet? No: This is not possible. But, let me explain. Here is the moon:—now let us start with the moon when it was first projected in its orbit. Under the

action of the impulsive force it would have moved off in a straight line, with a certain determined velocity, which we can measure. If this impulse had not been given to it, and it had been left free in space, it would have dropped toward the centre of the earth with a certain velocity, which we can also measure. Now, under the action of these two forces, it does not obey either of them, but takes a direction intermediate between the two, and swings in a curve about the earth. And here is the stated point: if, under the action of an impulsive force, it would in a second of time reach that point in a straight line, under the attraction of the earth it is drawn down, and the amount by which it is drawn down is the amount through which it falls during that second of time.

One more grand point is to be accomplished, and we are through. First: inasmuch as the moon is falling, it is necessary to note how much it falls. That is easily measured: all we have to do is to remark the amount of declension from a straight line which it would have pursued in a second of time. A straight line is easily measured, and gives the value of the distance through which a body located at the moon will fall toward the earth in one second.

Now the grand point is whether that distance is what it *ought* to fall, under the hypothesis of the law of gravitation. When Newton undertook this investigation he was not provided with accurate data. It was easy to compute how far a body should fall in a second of time—every person can do that. Only follow this law, beginning with 16 feet a second at a surface of the earth, or at the length of the earth's radius. Just square the distance, which will be successively 2, 4, 9, 16, and so on, till at the distance of the moon, or 60 times the length of the earth's radius, it will be 3,600. Since this computation was so easy, all that was necessary was to measure the space through which the moon did fall, and if they were equal, then of course the demonstration was made.

Yet, alas for the toil of the philosopher! His data were incorrect, and for seventeen years did he goad his mind to the subject, toiling day and night to make this coincidence perfect, but it would not agree; so he threw his laborious computations away in despair.

But, in attending a meeting of the Royal society in London, he happened to catch the sound of the voice of an individual who was talking about a recent measurement of the circumference of the earth. That was the principal element entering into the computation. The new measurement differed from the old. Here, thought he, may be the source of my error. He takes down his old computations,

and substitutes the new measurement of the diameter of our globe, which makes a difference in the proportional distance to the moon. The result he anticipates is coming out. But his nervous system sinks beneath the intense excitement—he yielded up the computation to a friend, for he could not make it himself. The coincidence was perfect—the grand demonstration was made—the law of gravitation was proved. At last he had grasped the key to the mysteries of the universe, and held it with a giant hand.

THE GUARDIAN ANGEL.

"Take heed that ye despise not one of these little ones; for I say unto you, that in heaven their angels do always behold the face of my Father which is in heaven."
ST. MATTHEW, XVIII. 10.

THE engraving opposite shows the Guardian Angel guiding the footsteps of the trustful child. Grimeaux, the painter, has taken for his subject the two beautiful passages in the ninety-first psalm:—

"For he shall give his angels charge over thee, to keep thee in all thy ways;
They shall bear thee up in their hands lest thou dash thy foot against a stone."

The old masters, who, like the German artists of the present day, drew their best inspirations from the Scriptures, never perhaps, embodied a more beautiful idea than that of the Guardian Angel. A little Germanesque it might be, but what really great effort is untiring by nationality? The picture, taken as a whole, is a fine moral poem, and full of meaning in every line. The dangers of life are typified by the dark sea which lies on each side of the narrow neck of land down which the child is being guided by the Angel. The brink of the precipice on either hand is hidden by flowers, which represent the delusive pleasures of the world. The angel, from behind, like a mother waiting upon the trembling feet of an infant, with careful palms, watches, lest he should swerve from the narrow path. She does not touch him—to his own free will his footsteps are left, until his inherent helplessness calls forth the gentle guidance of her hands. Her white wings curve around as though doubly to assure the child, for does it not say in the psalm—

"He shall cover thee with his feathers, and under his wings shalt thou trust"?

The face of the angel is very fine. Annibal Caracci, whose angels, "with hair blown back," reach the highest point of spiritual

the new measurement of the globe, which makes a difference in the distance to the moon. But the new measurement is coming out. But the old measurement sinks beneath the intense light of the new. The old yielded up the computation he could not make it himself. The new was perfect—the grand demonstration—the law of gravitation at last he had grasped the key of the universe, and held it in his hand.

GUARDIAN ANGEL.

He despises not one of these little ones; that in heaven their angels do always see them. My Father which is in heaven."

ST. MATTHEW, XVIII. 10.

The picture opposite shows the Guardian Angel, the footsteps of the trustful child, the painter, has taken for two beautiful passages in the life of the child:—

Give his angels charge over thee, to keep thee by day and by night; that they may carry thee up in their hands, lest thou dash thy foot against a stone."

The picture, taken from the life of a child, who, like the German artist, drew their best inspiration from the Scriptures, never perhaps, more beautiful idea than that of the Guardian Angel. A little Germanesque picture, at what really great effort is not to be wondered at. The picture, taken from a fine moral poem, and full of every line. The dangers of life are the dark sea which lies on the narrow neck of land down which the child is being guided by the Angel. The precipice on either hand is the abyss, which represent the delusion of the world. The angel, from the mother waiting upon the trembling infant, with careful palms, he should swerve from the narrow path. He does not touch him—to his feet his footsteps are left, until his weakness calls forth the gentle hands. Her white wings as though doubly to assure the child, as it not say in the psalm—

Give thee with his feathers, and under his wings thou shalt trust."

The angel is very fine. An angel whose angels, "with hair blown by the wind," the highest point of spiritual

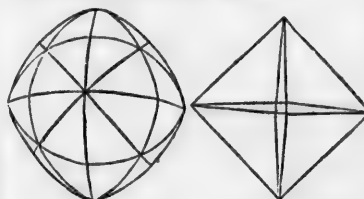


The Guardian Angel.

feeling, never painted a more beautiful one. But description is dull when employed upon such a picture; we have been vainly attempting to paint with the pen what the reader can understand at one glance by looking at the engraving. Both in idea and in execution it is a work of high art—of an art which addresses itself to the breadth and depth of human feeling rather than to the narrow edge of conventionalism, however refined.

DIAMONDS.

THE diamond is a mineral body of great value and hardness, first discovered in Asia. The primitive form of this precious stone is the regular octoedron, each triangular facet of which is sometimes replaced by six secondary triangles, bounded by curved lines; so that the crystal becomes spheroidal, and then presents forty-eight small facets. These two peculiar characteristics of the diamond are exhibited in the subjoined figures.



Many stones when rubbed exhibit very distinct electrical effects, and they will attract or repel light bodies which are brought into their neighborhood. The diamond, when excited, exhibits positive electricity; whereas, the other precious stones, if rough, afford negative electricity. In general, however, it does not retain this electricity for any considerable length of time.

Diamonds become phosphorescent, when exposed to the rays of the sun. Many of them, however, do not possess this property, although agreeing, in color, form, and transparency, with those which readily become luminous. The continuance of the phosphorescence varies from five or six seconds to a full hour, and this even when the stone has not been exposed more than a few seconds to the rays of the sun. It is phosphorescent under water, as well as in the air. The diamond, when exposed to the blue rays of the prism, becomes phosphorescent; but when exposed to the red rays is not so. The spark from a charged jar produces the same effect as

exposure to the sun's rays. Exposure to the light of a wax-candle also produces phosphorescence.

Diamonds are found chiefly in the kingdoms of Golconda, Visapour, Bengal, the island of Borneo, and Brazil. The mines are generally adjacent to rocky hills and mountains, and sometimes the diamonds are found scattered in the earth, within two or three fathoms of the surface. In other places, the miners dig through rocks to the depth of forty or fifty fathoms, till they come to a sort of mineral earth in which they find the diamonds enclosed. This earth is sometimes of a yellowish, and sometimes of a reddish color, and adheres to the stone so strongly, that it is difficult to get it off. A sufficient quantity of this earth being dug out of the mine, it is thrown into a cistern of water, where, having soaked for some time, it is stirred about till the clods are broken, and the gravelly matter sinks to the bottom. After this a vent is opened, and the cistern supplied with clean water, till all the earthy substance is washed away, and nothing but gravel remains. What thus settles at the bottom is spread to dry in the sun, then sifted, and afterward carefully searched with the hands to find out the diamonds, at which the workmen are so expert, that the most minute bit of a stone can hardly escape them. It sometimes happens, however, that the earth is so fixed about the diamonds, that, before they are rubbed on a rough stone with sand, their transparency can not be discovered.

In the kingdom of Golconda, or in that of Visapour according to some maps, are the mines of Raolconda, which have been discovered above two hundred years. The earth here is sandy, and full of rocks; and in these rocks are found several little veins, half an inch or an inch broad, out of which the miners, with hooked irons, draw the sand or earth that contains the diamonds, breaking the rock when the vein terminates, that the track may be easily found again and continued. To separate the diamonds from this earth, it undergoes several washings and other operations, as we have already observed. The miners are obliged to work almost naked, and have likewise inspectors to prevent their concealing the diamonds; which yet, notwithstanding all this care, they sometimes find opportunities of doing. Tavernier says, he saw one detected who had put a small stone into the corner of his eye; but swallowing a diamond is a surer and more usual method among them. If the miners meet with a stone of fifteen or sixteen carats, they are allowed a reward, besides their usual pay, which is very little. The king has two per cent. for all the diamonds that are sold; and

rays. Exposure to the sun also produces phospho-

round chiefly in the kingdom of Visapour, Bengal, the island of Brazil. The mines are in rocky hills and mountains; the diamonds are found in the earth, within two or three feet of the surface. In other places, the diamonds are found in the rocks to the depth of forty feet, till they come to a sort of gravel, in which they find the diamonds. The earth is sometimes of a yellowish color, and sometimes of a reddish color, and is so strongly, that it is difficult to dig out of the mine, it is often of water, where, having time, it is stirred about till the earth is stirred about till the gravelly matter. After this a vent is made, and the mine is supplied with clean earthy substance is washed, but gravel remains. What is left at the bottom is spread to dry in the sun, and afterward carefully examined, till the hands find out the diamonds. The workmen are so expert, that a bit of a stone can hardly be mistaken for a diamond; sometimes happens, however, that is so fixed about the diamonds, they are rubbed on a piece of sand, their transparency can

be seen in Golconda, or in that of Minas Geraes, according to some maps, are the diamonds, which have been discovered in the last hundred years. The earth is full of rocks; and in these several little veins, half an inch wide, out of which the miners draw the sand or gravel, and break the diamonds, breaking the vein terminates, that the diamonds are found again and continue to be found in the diamonds several washings and other operations we have already observed. The miners are obliged to work almost naked, and the inspectors to prevent their diamonds; which yet, notwithstanding, they sometimes find diamonds. Tavernier says, he who had put a small stone in his eye; but swallowing a diamond, and more usual method of the miners meet with a diamond of sixteen carats, they are allowed, besides their usual pay, a reward. The king has two per cent on diamonds that are sold; and

also a duty from the merchants, according to the number of hands employed in digging.

There are other mines at Gani, or Coulour, in the kingdom of Golconda, where they find diamonds from ten to forty carats and upward; but these are not very clear, their water being usually tinged with the color of the soil, which in some places is yellowish, in others black and moist, and in others reddish. Another defect of some consequence, is a kind of greasiness appearing on the diamond when cut, which takes off part of its lustre. Here the miners usually dig to the depth of twelve feet, or till they find water, which prevents their going further. The earth is carried from the mine by women and children into a neighboring enclosure, where it is washed, and then dried and sifted. According to Tavernier, there are generally sixty thousand persons (men, women, and children) employed in the mines of Coulour; they work almost naked like the miners of Raolconda, and are watched in the same manner by inspectors.

A great number of diamonds are found near Soumelpour, a large town in Bengal, situated on the river Goual. From this river, all our fine diamond-points, or sparks, called natural sparks, are brought, where they search for them after the great rains are over—that is, after the month of December. At that season, when the water is clear, eight or ten thousand persons, of all ages, come out of Soumelpour and the neighboring villages, and examine the sand of the river, going up to the very mountain whence it springs. After this examination, they proceed to take up the sand wherein they judge diamonds are likely to be found; and this is performed in the following manner: Having made a dam round the place with earth, stones, fascines, &c., the river being then very low, they lade out the water, and dig about two feet deep, carrying the sand into a place walled round on the bank of the river, where the process is much the same as at the mines above-mentioned, and the workmen are watched with equal strictness. As to the diamonds of the island of Borneo, they are found in the sand of the river Succadan, or Succadano, and perhaps in some other parts of the island, with which we are little acquainted.

The provinces in Brazil, known to possess diamonds, are Minas Geraes, Minas Novas, Goyaz, and Matto Grosso; but it is supposed that several of the other provinces are furnished with these highly-prized gems. The diamonds found in Minas Geraes are generally the largest, but they are not of the purest water. The most celebrated diamond mines in Brazil are those of Serrado Frio, which are also known by the name of the Arrayal Dia-

mantino, or diamond district, properly so called. These mines were not actually discovered until the government of Dom. Lorenzo d'Almeida, although the diamonds were known to have been in the possession of the negroes, who met with them accidentally while employed in gold-washing, and other persons ignorant of their value, long before that period. They were first taken from Brazil to Lisbon in 1728, by Bernardo da Silva Lobo. He showed them to the Dutch resident consul, who recognised them as diamonds, and informed him of his important discovery. This district is surrounded by almost inaccessible rocks, and was formerly guarded with so much vigilance that not even the governor of the province had the liberty of entering it without the special permission of the director of the mines.

The mines are wrought by accumulating the cascalhao, a kind of ferruginous earth (in which the diamonds are found mixed with flints), and washing it. The former operation is performed during the hot season, at a time when the beds of the rivers and torrents are dry, and the diamond-sand can be easily extracted. When the wet season arrives, the operation of washing commences. It is performed in the open air, and frequently under sheds, where the action of the sun is least likely to injure the health of the negroes. At the bottom of the shed glides a small stream, which occupies one of its sides. Seats, raised, and without backs, are arranged along the shed, in such a manner that the subaltern officers (feltors) are enabled to watch the negroes at work. One feltor superintends eight negroes. Each negro works in a compartment of the shed, separated or walled off, as it were, from the others. The cascalhao to be examined is placed in troughs close to the stream, and the negroes are introduced entirely naked, excepting in time of extreme cold, when they are allowed a kind of waistcoat, but without either pockets or lining. They are furnished with an alavanca, a kind of handspike, by means of which they separate the earth from the flint, and then, taking the largest stones in their hands, they proceed to search for the diamonds. Notwithstanding the precaution of making the negroes work naked, robberies of diamonds are of frequent occurrence. When a negro discovers a diamond, having first shown it to the feltor, he deposits it in a large wooden vessel suspended in the middle of the shed. If any negro is fortunate enough to discover a diamond weighing seventeen carats, he is purchased by the government, and receives his liberty. The discovery of a stone of less weight also confers liberty upon the finder, but with some restrictions. Various premiums are distribu-

ted, according to the value of the stone, even to a pinch of tobacco. Notwithstanding every imaginable precaution, negroes find means to purloin diamonds, which they dispose of to smugglers (contrabandistas) at a very low price. The latter dispose of them chiefly at Tjuen and Villo do Principe. They obtain a higher price at the latter, because their risks are greater in transporting them thither. The negroes frequently contrive to impose upon the contrabandistas, as they have the means, by some simple process, of giving crystals the appearance of rough diamonds, so as effectually to deceive them. Formerly there were as many as thirty thousand negroes employed in the mines, but the number employed at a later day did not exceed twenty thousand.

The diamonds differ greatly in size. There are some so small that twenty would scarcely make a carat. It is rarely that, in the course of a year, more than two or three are found weighing from seventeen to twenty carats; and two years may pass without discovering one of the weight of thirty carats.

The administration of the diamond mines is regulated by a law of 1771. Down to the date of this law, the right of working the diamond mines was farmed out; but, from that period, the government has taken it into its own hands, and they are all under the superintendence of a board. The crown receives one fifth of the total value.

To bring diamonds to that perfection in which their beauty consists, the diamond-cutters begin by rubbing two rough diamonds against each other, after having well cemented them to the ends of two blocks, called cutting-sticks, thick enough to be held in the hand. By this means they rub off the dull outer crust, and reduce them to form, in order to their being polished; and this powder, thus rubbed off, and received in a little box, serves to polish the stones. Diamonds are polished by means of a mill, which turns a wheel of cast iron, smeared with diamond-dust, mixed with oil of olives. This wheel moves horizontally; and before the diamonds are applied to it, they are soldered into pieces of metal prepared for that purpose. But diamonds are more expeditiously divided, by finding the grain of the stone, as it is called; that is, the disposition of the laminae or plates of which it is composed, and introducing between them the point of a fine chisel. When this is properly done, a stone will split as evenly as a piece of talc, and give two diamonds or more, if the thickness will allow it, of the same breadth or surface with the original one. The splitting of a diamond sometimes answers another end, when the stone has a flaw or blemish in it, which greatly debases its value;

for, by separating the plates at a proper depth, the flaw may be removed.

The diamonds chosen for cutting glass are all crystallized. The faces are curved, and hence the meeting of any two of them presents a curvilinear edge. If the diamond be so placed that the line of the intended cut is a tangent to this edge near its extremity, and if the two surfaces of the diamond laterally adjacent, be equally inclined to the surface of the glass, then the conditions necessary for effecting the cut are complied with. In addition to the cutting and engraving of glass, the diamond has been very advantageously employed in drawing minute lines on the surface of steel, by which all of the beautifully-variegated tints of the rainbow may be produced.

As an article of commerce, the value of diamonds is measured by various circumstances, among which are their size, form, weight, color, purity, and cutting. In the diamonds which have been polished, the most valuable are the limpid, which command a price twice as great as those that are tainted with blue, gray, black, yellow, or vitreous spots. The quality of diamonds, in reference to their purity and transparency, is described by the terms the first, second, and third water. The first are those which are of the utmost clearness, and free from any fault; the second are marred by dark spots or flaws; and the third are of the least value, being tinged with yellow, brown, green, blue, or blackish flaws. Nor is the cutting of the diamond of less importance than its quality, for this is regulated by its form. The proportion of the height to the circumference of the diamond, and the regular order of the sides, tending to increase its brilliancy, governs, in some measure, its value. Hence the brilliant is of greater value than the rose-diamond, and the rose-diamond than the table-stone. Although the value of the different species of the diamond is regulated by certain fixed rules known to jewellers, still it is depending so much on varying circumstances, that no permanent valuation can be established for the different sorts. It appears, however, that they advance in a geometrical ratio according to their form.

The different forms in which diamonds are cut by the Dutch and English, and thus varying in value according to their size and quality, are familiar to all who are conversant with our jewellers' shops. The form most calculated for lustre is the brilliant.

The rose-diamond that is usually cut from the gem which is too thin to be cut into a brilliant without much loss, has only a crown, and is formed of equilateral triangles. It is composed of two rows of three-sided facets. Fragments of rose-diamonds which are very

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small are sometimes seen, and also small roses
for ear-drops.

The table-diamond is a flat gem, without
much depth or lustre. It is usually cut into
a table, with four planes and eight facets.

Peculiar care is required in the cutting of
gemms depending upon their form and color, in
order to exhibit their beauty with the greatest
effect.

The step, or pavilion cut, is especially
adapted to colored gems, as the light is re-
flected by this form in the highest degree.

The mixed facet-cut is compounded of the
brilliant and pavilion cuts, the first of which
is on the crown, and it contributes greatly to
increase the lustre.

The elongated brilliant facet-cut is some-
times used in the cutting of stones.

The table-cut, appropriate for sealstones, is
composed of an uneven and conchoidal table,
surrounded by one or two circular rows of
facets.

The double facet-cut has a crown compo-
sed of two rows of facets, with a collet of a
pavilion form, and is well adapted to conceal
any flaws or fissures in the stone.

The cabochon-cut is either flat, convex, or
double-convex, that is, arched; it may be on
both sides, or only on one. This cut is par-
ticularly applicable for semi-transparent gems,
or those which display their peculiar colors,
such as the opal, moonstone, &c., or collect
the light in a small space, on one or several
parts, according to the convexity they have
received. The cabochon-cut may have one,
two, or more rows of facets, and opaque
stones receive with advantage the facets over
the whole surface. Garnets, for instance,
which are generally of a dark color, are cut
in cabochon, the lower plane excavated in a
circular form, and the upper plane all around
with facets. Other gems, the interior faults
of which can not be concealed, may be im-
proved by this cut, giving them more trans-
parency, vividness of color, and a greater de-
gree of fire.

As allusion has been made to the great
value of diamonds, it may be mentioned that
at a very extensive sale of gems made in
London, during the year 1837, there were
sold an amount to the value of nearly two
hundred and thirty thousand dollars. Among
these there were a pair of ear-rings, formerly
the property of Queen Charlotte, which pro-
duced fifty-five thousand dollars; a sapphire,
set with brilliants, two thousand, four hundred
and sixty-five dollars; brilliant drops, which
were stated to have formerly belonged to
Marie Antoinette, eight thousand, eight hun-
dred and seventy-five; a Turkish dagger,
mounted with brilliants and rubies, sold for
four thousand dollars; and the celebrated

Nassauck diamond was purchased at thirty-
six thousand.

It may be proper here to notice the princi-
pal diamonds which are now known to exist
in Europe. A diamond in the possession of
the grand-mogul, is in form and size like half
a hen's egg. Its weight is two hundred and
ninety-seven and three sixteenths carats. It
is cut in a rose form, is perfectly limpid, and
it is valued at eight hundred thousand dollars.
A diamond found upon the island of Borneo,
was formerly in the possession of the rajah of
Mattan. This is of an egg form, and of the
first water. It weighs three hundred and
sixty-seven carats. A diamond, formerly be-
longing to the sultan of Persia, about the
size of a pigeon's egg, was purchased by the
empress Catharine for about four hundred
and fifty thousand dollars, and an annuity of
twenty thousand. One weighing a hundred
and thirty-eight and a half carats is in the
treasury of Rio Janeiro; and a single gem is
possessed by the Austrian crown, which is
valued at half a million of dollars. The fa-
mous regent or Pitt diamond, which was pur-
chased by Mr. Pitt, when governor of Ben-
coolen, in Sumatra, and by him sold to the
regent duke of Orleans, who placed it among
the crown-jewels of France, was valued by a
commission of jewellers, in 1791, at over two
millions of dollars. Another diamond, be-
longing to the crown of France, is in the
form of a pear. It is cut as a double rose-
diamond, and was purchased for a hundred
thousand dollars. Among the crown-jewels
of France there is one diamond of a sky-blue,
and valued at five hundred and fifty thousand
dollars. A rough one in the possession of the
prince-regent of Portugal, is said to weigh an
ounce troy.

Two large diamonds belong to the Turkish
crown, one of which is valued at about one
hundred and eighty thousand dollars; and
one was discovered in Brazil, in 1780, which
is now at Rio Janeiro, weighing seventy-two
carats and three fourths grains. Another
was found at the same place, weighing sev-
enty carats. It is said that the largest dia-
mond known in the world, is now in the pos-
session of the king of Portugal. It is in its
rough state, being the size of a pigeon's egg,
and has been valued at the enormous sum of
two hundred and eighty millions of dollars,
although it is the opinion of many jewellers
that it is a white topaz.

A brief description of the crown-jewels of
Victoria, the reigning queen of England, may
perhaps here be interesting. The crown it-
self weighs about three pounds, and is com-
posed of hoops of silver, enclosing a cap of
blue velvet. These hoops are studded with
precious stones; and upon the crown is a ball,

set also with precious stones, and surmounted with brilliants in the form of a Maltese cross. The rim is flowered with Maltese crosses and the *fleurs-de-lis*. In the centre of the large Maltese cross is a splendid sapphire, and in front is the immense ruby once worn by Edward the black prince. Numerous other precious stones, rubies, pearls, and emeralds, are intermingled with these gems down to the rim, which is formed of ermine. The following is the estimated value:—

Twenty diamonds round the circle, \$7,500 each	\$150,000
Two large centre diamonds, \$10,000 each	20,000
Fifty-four smaller diamonds, placed at the angles of the former	500
Four crosses, each composed of twenty-five diamonds	60,000
Four diamonds on the tops of the crosses	200,000
Eighteen diamonds contained in the <i>fleurs-de-lis</i>	50,000
Eighteen smaller diamonds, in the same	10,000
Pearls, diamonds, &c., on the arches and crosses	50,000
One hundred and forty-one diamonds on the mound	2,500
Twenty-six diamonds on the upper cross	15,000
Two circles of pearls about the rim	4,000
	\$562,000

NIGHT.

'Tis night—solemn night; the broad eye of day has closed, and all its joyous sights and sounds have departed; a majestic gloom broods over all things; night has wrapped in her oblivious mantle, the golden glories of day's bright ruler, and naught breaks the fearful contrast, save the twinkling of some far-off star, whose feeble rays remind us that light has been.

And yet the night is not wholly unlovely, or unloved; for when the day is past, meditation delights to pursue her task 'neath her shadowing wing. When are the woods more solemn, than when darkness broods over the green foliage, or the night winds in fitful gusts sway the outspreading branches of the forest trees? It is such a time as this that suits the spirit that has drunk deeply of the cup of suffering, and these gloomy sights and solemn sounds are sweeter than music to the ear which has been satiated with the fulsome and unmeaning adulation of a false world, and the mind finds even in the forest's gloom, and the wailing sound of the hoarse night wind, something in unison with the sombre thoughts that are dwelling within.

The thoughts, too, at such a season, are not drawn aside by the multitude of objects which bright day presents, but the mind is turned in upon itself—its own acts are the

objects of scrutiny, the emotions which lurk deep in the recesses of the soul are brought under strict view, passion is cooled, reason triumphs, and thought, for the moment, is supreme.

Night is the season for examination; the acts of the day then present themselves before the mind for judgment; conscience stamps its approval or condemnation on every action, and by its impartial voice we are taught to improve the future by the follies and errors of the past.

Night is the time for devotion; the solemn sky, with its gleaming fires, and the awful silence which prevails, press holy feelings on the soul—feelings which bid man bow and humbly worship; for at such seasons the world is shut out, and man, cut off from the throng of his fellows, stands alone with God. How important then that sin should be confessed, pardon sought, and the conscience cleansed ere sleep be invited.

Night is the time for music's soft strain; its notes breaking on the stillness which reigns around, seem like the voices of far-off angels, and every pulsation of the heart is in unison with the song. The mind, too, is then better suited to the reception of holy impressions, and oft at such seasons we seem borne away from earth, and stand with the heavenly harpers near the eternal throne.

Let us, then, ever improve its pensive gloom, and its solemn silence—let music swell, let prayer arise, let thought be free to range in the extended empire which God has given it, and we shall have abundant reason to bless God for the night.

THE SOLAR SYSTEM.

If the younger portion of our readers will commit to memory the following lines, they will ever after have a correct idea of the arrangement of our solar system. It will fix it in the memory like the length of the months by the old "thirty days hath September," &c.

"Poised in the centre hangs the glorious Sun,
Round which the rapid Mercury doth run;
Next, in due order, Venus wheels her flight,
And then the Earth, and Moon, her satellite;
Next fiery Mars pursues his round career;
Beyond, the circling Asteroids appear;
The belted Jupiter remoter lies,
With his four moons attendant thro' the skies;
The belt-ringed Saturn roams more distant still,
With seven swift moons he doth his circuit fill;
While with six satellites, that round him roll,
Uranus slowly circumsolves the whole.
But far beyond, unscanned by mortal eye,
In widening spheres, bright suns and systems lie,
Circling in measureless infinity!
Praise o'er the mighty scenes, O man! and raise
Your feeble voice to the CREATOR'S praise!"

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pire which God has given
e abundant reason to bless

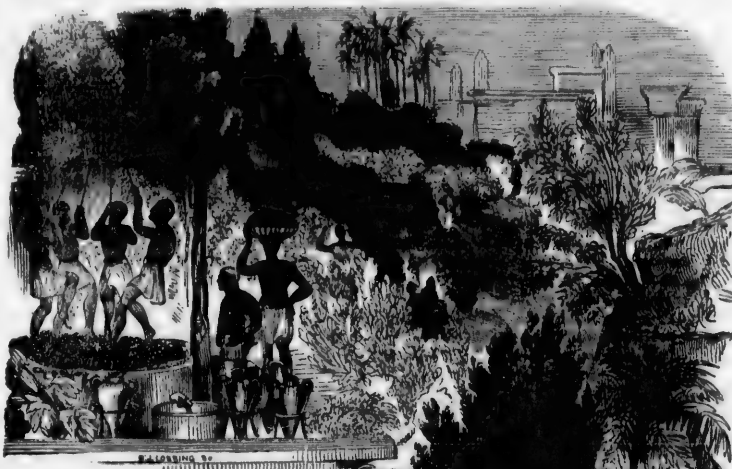
AR SYSTEM.

portion of our readers will
the following lines, they
a correct idea of the ar-
lar system. It will fix it
the length of the months
ays hath September," &c.

hangs the glorious Sun,
pid Mercury doth ran;
Venus wheels her flight,
, and Moon, her satellite;
races his round career;
Asteroids appear;
remoter flies,
e attendant thro' the skies;
Sura roams more distant still,
oons he doth his circuit fill;
elliptics, that round him roll,
unvolves the whole.
scanned by mortal eye,
e, bright suns and systems lie,
less infinity!
uty scenes, O man! and raise
to the CREATOR'S praise!"

ANCIENT WINE-PRESS.

131



ANCIENT WINE-PRESS.

IN Syria, the vintage begins about the middle of September, and continues for about two months. It is earlier in Palestine, where the grapes are sometimes ripe even in June or July; this arises probably from a triple pruning, in which case there is also a third vintage. The first is in August, the second in September, and the third in October.

Joyous, indeed, was the season when the grapes were plucked off, and carried to the wine-press, which was built in the vineyard, whose site was carefully chosen in fields of a loose, crumbling soil, on a rich plain, a sloping hill, rising with a gentle ascent, or, where the acclivity was very steep, in terraces turned as much as possible from the setting sun. The wine-presses were either built of stone, or hewn out of a large rock. The grapes were thrown into the upper part, to be trodden by men, and the juice flowed out into receptacles beneath, as appears from the engraving. The treading of the wine-press was laborious, but it was performed with singing, and sometimes accompanied with musical instruments.

Oil of olives was expressed in the same way, before the invention of mills. The existence of this practice in Palestine, is evident, from the language of



Moses: "Let Asher dip his foot in oil;" and from the threatening, "Thou shalt sow, but thou shalt not reap; thou shalt tread the olives, but thou shalt not anoint thee with oil; and sweet wine, but shalt not drink wine," Micah vi. 15.

To the custom of treading grapes and olives, reference is frequently made by the inspired writers. Thus the glorious conqueror, who appeared in vision to Isaiah, said, "I have trodden the wine-press alone; and of the people there was none with me: for I will tread them in mine anger, and trample them in my fury; and their blood shall be sprinkled on my garments, and I will stain all my raiment," Isaiah lxiii. 3. As the clothes of the treaders were sprinkled with the juice of the grapes, so were the garments of the Redeemer with the blood of his enemies, who were as easily and completely crushed by his almighty power, as are the full ripe clusters of the vine, beneath the feet of men. The same figure is employed in the book of Revelation, xiv. 18-20, to express the fearful destruction which awaits the adversaries of God and of man.

SHAKERS OF NEW LEBANON.

PERHAPS there is no sect whose principles and forms have been so misrepresented, and so little understood by the world, as the people called shakers. We have no doubt our readers will be interested in reading a description of a Sunday passed, in the green lap of New Lebanon, at the oldest and richest establishment of that most singular people, in this country. There, in the midst of that sweet circle of picturesque and verdant hills, two extremes of modern life have nestled down: fashionable society around the "springs," which suggest at least, if they do not exactly afford, physical health and comfort, and a couple of miles off, that sober company of separatists around what they deem "springs of living water, welling up to everlasting life." They are associationists in their way, which truly is a most negative and inverse way to one who is a believer in the passions, as the essential springs of all good energy in man, fed from the fountain of Divine love; but, they illustrate some of the advantages of combination, and we were moved to seek a lesson from them.

Their industry we could not see, it being Sunday, but there was a chance for us to spell out something of their life-ideal from the strange symbols of their worship. Passing their highly-cultivated gardens, and their neat, plain dwellings, we came to the meeting-

house, a spacious and quaint structure, which had yet a certain architectural beauty of its own. By its lead-colored, semi-cylindrical long roof, and its starched air of neatness, it resembled a meek quaker bonnet, while the details of doors and windows and green blinds were graceful and appropriate. Yet use and plainness evidently were the only presiding canons of their art. The side on which we entered, was filled from end to end with curious spectators like ourselves, though few of them we fancy, regarded the matter in so serious a mood as we did. Upon the other side, across the spacious, smooth floor, gleaming like a sheet of letter paper, and so clean that not a speck was visible upon it, we caught the full ensemble of the worshippers, ranged on benches running half across the room—benches without backs—sitting demure, their hands upon their knees, rows of men opposite to rows of women. The first glimpse of the latter startled us like a scene in the tombs;—they looked so much like white and sheeted ghosts, in their death-like linen caps and facial bandages and robes that hung so straight and close to the gaunt figures; old and young alike reduced to the same pattern, of which the ideal seemed the extinction of any most remote suggestion of beauty. The men and boys in their old-mannish uniform looked generally hale and cheerful, with a shrewd twinkle in the eye, despite a placid and submissive manner. Most of them were gentle and mechanical looking persons; but here and there was one more imposing and ambitious looking figure, who seemed as if he should have passions, and whose existence amid that monotonous, tame life we could not so readily account for. But the women were a sad sight; on them falls the heaviest penalty of this dear-bought and unnatural pence. The gravity of the scene was certainly impressive. Assuming that a life which satisfies so many and so long, and which has so succeeded in an outward way, could not have *nothing* at the core of it, and that the inner sense of their peculiarities must form a consistent whole of some sort, we gave respectful and studious attention to the exercises which now opened.

An aged voice, proceeding somewhere from the centre of the worshippers (we could not see the person), congratulated them upon the return of their sweet privilege of worshipping God after their own manner and understanding. This was simply and briefly said, and in a tone not cold nor formal, but quite human. Then by a simultaneous movement (whence communicated we could not tell), they were all on their feet at once, and began to pile away the benches in their respective corners, male and female, to make an open area for what was to follow, and stood waiting

and quaint structure, which architectural beauty of its blue-colored, semi-cylindrical starched air of neatness, its quaker bonnet, while the windows and green blinds appropriate. Yet use and were the only presiding. The side on which we from end to end with curiosity ourselves, though few regarded the matter in so we did. Upon the other smooth floor, gleaming letter paper, and so clean as visible upon it, we caught of the worshippers, ranged half across the room—sitting demure, their neat rows of men opposite

The first glimpse of the scene in the tomb;—white and sheeted death-like linen caps and robes that hung so straight and figures; old and young the same pattern, of which the extinction of any most of beauty. The men and womanish uniform looked cheerful, with a shrewd, despite a placid and subdued. Most of them were gentle looking persons; but here and there imposing and ambitious no seemed as if he should whose existence amid that life we could not so readily at the women were a sad the heaviest penalty of and unnatural peace. The one was certainly impressive. life which satisfies so many which has so succeeded in could not have *nothing* at that the inner sense of their form a consistent whole of respectful and studious attitudes which now opened.

proceeding somewhere from worshippers (we could not congratulate them upon the privilege of worshipping in manner and understanding simply and briefly said, and nor formal, but quite human simultaneous movement indicated we could not tell, their feet at once, and began benches in their respective female, to make an open to follow, and stood waiting

in their cross rows again. An elder then stepped forward and addressed the spectators, respectfully requesting them to abstain from talking, laughing, and other interruptions, and especially setting forth their law of cleanliness which had been grossly outraged on the previous Sunday, by some low, tobacco-spitting visitors, who had come to sner and be amused. The lesson was timely and impressive, and judging from the entire effect it took upon the crowd we should say that some of them could not have attended church to better purpose. We should not wonder if some careless hearts had the idea of outward purification seriously engraved upon them there, for the first time perhaps in their lives. The speaker said he was aware that their customs were singular, naturally causing astonishment and even ridicule in those who could not understand them as they did; but he gently reminded them of the respect due to their peculiarities, to which they had a perfect right. Indeed, they all evinced a perfect sane consciousness of their relative position to the rest of the world, which they did not suffer to disturb them. The most singular thing about their singularities, was the absence of all fanatical intoxication. In the songs and dances which ensued, we saw nothing of that violence and phrensy which have been reported of them; all was moderate, deliberate, and self-possessed; no distortions, whirlings round on tiptoe, groans, or frantic shouts. The spirit did not seem to wrestle with them, but to descend upon them soothingly; and we were convinced that the spirit of their system is subdued and quiet and that if such things ever occur as above hinted they are only exceptional.

First came a spiritual hymn or chant, sung standing, to a very homely, humdrum, secular sort of a tune, with a brisk, jig-like motion. It was sung in unison, all the voices on one part, from gruffest base to shrillest treble; the very plainest, baldest thing that could be called music having a rhythm and a melody, but rigorously rejecting all unnecessary wealth and coloring of harmony. The close of every song was marked by unisonous, sepulchral lengthening out of the last note. There reigned the same neatness and correctness in this performance, as in their costume and their clean floor; no false notes or slips of time. It was music emptied of the sentiment of beauty, of which all their ways betray a horror: it was music as an exercise, a ceremony, and not as a fine art; the ghost, or skeleton of music, enough to show that they do believe in measure, rhythm, order, but not in charm and beauty. They seem to recognise the inherent presence of music in the very law of life, to accept the symbol of pervading harmony, but they reject the ultimate expression

and result thereof in forms of art, in beauty; they study to possess the law without the concretion and embodiment of it in nature; it seems the very essence of their creed to wage exterminating war with nature, to soak out the blood and coloring substances from life's fleshy tissue, and simply keep the pale and lifeless form; and so if they accept the visits of the angel, St. Cecilia, it is only when she comes in a mop-cap and strait gown of a ghostly white, and promises to leave behind her every tempting charm, and everything that can lend worth to earth. For the shaker wants the spiritual *without* the material; not the spiritual *in* the material. Life without passion, unity without variety, use without beauty, law without attraction, and purity by sheer simplistic abstinence, are his fancied solution, but in reality evasion, of the grand life-problem.

Next came the dance. Two by two the men, and two by two the women, getting time and impulse from the jig-like hymn of their own chanting, both hands dangling loose and fin-like before the breast, went journeying round the room in circles, with strange limping step, stout old men and starch old maidens, spite of solemn faces, stepping off as briskly as the youngest, and forgetting the apparent loss of dignity in the profound obedience of all this. Some of the older and infirm members only stood still and looked on, but kept up the same dangling of the hands, as if to fan the flame. Occasionally they would pause in the middle of these "divine circles," as one of the speakers called them, and the silence would be broken by some female voice, supposed to be under the moving of the spirit, declaring "her unspeakable satisfaction in this life, that she felt that she had found God," and a few more sentences to this effect, which was answered in like quiet manner, passionless, and mechanical, by some other sister, or by some old man, or young convert warmly giving his experience. Then they would journey on again, with steady earnest pertinacity, as if by way of symbolizing the dull journey of life.

REASON.—Reason is used by those most acute in distinguishing, to signify that power of the mind by which we draw inferences, or by which we are convinced, that a relation belongs to two ideas, on account of our having found that these ideas bear certain relations to other ideas. It is that faculty which enables us, from relations and ideas that are known, to investigate such as are unknown, and without which we never could proceed in the discovery of truth a single step beyond first principles.

SOCIAL INFLUENCE.

It is a most interesting, as well as solemn fact, that every individual member of society is responsible, to some degree, for the common good. We may say to each one, the Almighty has placed the moral character, the social condition, the spiritual growth of many others, to a considerable extent, under your care. He has linked together all men with a thousand intersecting chains; many of which, so to speak, connect with each one of us; and by means of these, our influence is continually flowing out in every direction. Thus we are reciprocally influencing each other's conduct, and moulding each other's character.

It is astonishing how much influence a single person sometimes has over a whole community. He impresses his mark upon all around him, and it is visible to all. But the influence of a person is not to be measured by its visible effects. Those cases which are the most striking, generally attract attention because they bear somewhat of an eccentric type, and have respect to things out of the common course.—When the influence is to anything peculiar, it is instantly seen. But in proportion as it falls in with a current, or is expansive and well balanced, it loses its individuality. The most obvious case which meets our eye, is only an example of that formative power which we all have over each other; though it is generally more secret in its effects.

Let us not underrate this influence, nor take too limited views of its extent. There is no one who does not possess and exercise it, and there is no one who is not affected by it in others. And, if desirable, its amount may always be increased by cultivating those qualities, and expanding those faculties of ours upon which it is based.

There are various distinct spheres of life where this influence is peculiarly exerted, and wherein Providence seems to have designed to afford us an opportunity for benefiting each other.

One of these spheres is the family. By ordaining the ties of kindred, and collecting us together in family groups, a foundation has been laid for much delightful and improving influence. The relations into which we are thus brought to each other, give us a reciprocal power which, if rightly improved, secures the most beneficial results; but which, if perverted, is to an equal extent disastrous. The influence of a parent over a child, probably exceeds every other. By it, the child's character will receive a bias which nothing can afterward fully remove. Hence the untold importance of giving it early a right direction. "Take this child and nurse it for

me," is the address of God to every parent, and a solemn responsibility attends the charge. The child will be very much what the parent attempts to make it. Every hour impressions will be made upon it which nothing can efface. Nor is the influence of other members of the family upon each other, very much below that of the parent.

Next we will mention the social circle of friends. The influence here exerted ought, perhaps, to be estimated next to that in the family. In such a circle, drawn together by the attractive power of coincident tastes and feelings, where heart mingles with heart, and thoughts unbidden flow freely forth, there is such a blending of spirits, and such a trustful abandonment of self to the guidance of others, as always results in a mental assimilation of character.

Even the local circumstance of neighborhood provides another sphere of influence, by no means of little account. For it is impossible, even for the most dissimilar persons to be near each other, to be daily seen, and brought into contact in the business of life, without insensibly producing deep impressions, and working changes of feeling and character.

The civil bonds of society, also, by uniting men in national ties, and awakening common feelings of mental dependence, oneness of interest, and patriotic desire, is another foundation for personal influence of considerable extent. Those who are united together for the support of a good government, to maintain common rights, to resist oppression, establish justice, and foster those institutions which are necessary for the well-being of society and progress of the race, have, from this interesting relation to each other, a mutual sympathy awakened, which gives them an important influence over each other's hearts.

The last sphere of social influence which we shall mention in this brief article, is the church. As religion is one of the deepest principles of our nature, the influence arising from this source is of wonderful power. Each of the other relations we have mentioned affords a means of promoting mental and spiritual improvement; but this, being founded upon spiritual affinities, affords the most delightful opportunities for operating upon other minds.—So tender and sacred is this relation, that it invests the humblest member with a degree of consideration, and secures a deference to his opinions and wishes, which he could not otherwise attain; while every one finds ample room here, and open hearts, to receive the good impressions he may have the ability and the will to make.

But we will enlarge upon these various spheres of social influence. They are all interesting; they are all important; they are all

attended with very weighty responsibilities. In the family, the social circle, the neighborhood, the state, the church, God has assigned to us the most important trusts, and given us the means, ay, even so appointed our condition that we can not avoid being instrumental to the accomplishment of much, either good or evil.

THE LONDON GIN-PALACE.

THE gin-palace is generally at the corner of two intersecting streets in a gin-drinking neighborhood: it towers, in all the majesty of stucco pilasters, in genuine cockney splendor, over the dingy mansions that support it, like a rapacious tyrant over his impoverished subjects.

The doors are large, swinging easily upon patent hinges, and ever half-and-half—half-open and half-shut, so that the most undecided touch of the dram-drinker admits him. The windows are of plate-glass, set in brass sashes, and are filled with flaming announcements in large letters, "The Cheapest House in London"—"Cream of the Valley"—"Creaming Stout"—"Brilliant Ales"—"Old Tom, fourpence a quarter"—"Hodge's Best for mixing"—and a variety of other entertainments for the men and beasts who make the gin-palace their home. At night splendid lights irradiate the surrounding gloom, and an illuminated clock serves to remind the toper of the time he throws away in throwing away his reason.

Within, the splendor is in keeping with the splendor without; counters fitted with zinc, and a long array of brass *taps*; fittings of the finest Spanish mahogany, beautifully polished; bottles, containing cordials, and other drugs, gilded and labelled, as in the apothecaries' shops. At one side is the bar-parlor, an apartment fitted up with congenial taste, and usually occupied by the family of the publican; in the distance are *vistas*, and sometimes galleries, formed altogether of huge vats of the various sorts of liquor dispensed in the establishment. Behind the counter, which is usually raised to a level with the breasts of the toppers, stand men in their shirt-sleeves, well-dressed females, or both, dispensers of the "short" and "heavy;" the under-sized tipplers, raising themselves on tiptoe, deposite the three halfpence for the "drop" of gin, or whatever else they require, and receive their *quantum* of the poison in return; ragged women, with starveling children, match and ballad vendors, fill up the foreground of the picture. There are no seats, nor any accommodation for the customers in the regular gin-

palace; every exertion is used to make the place as uncomfortable to the consumers as possible, so that they shall only step in to drink, and pay; step out, and return to drink and pay again. No food of any kind is provided at the gin-palace, save a few biscuits, which are exhibited in a wire cage for protection against the furtive hand; drink, *eternal*, poisonous drink, is the sole provision of this whitened sepulchre.

There is not in all London a more melancholy and spirit-depressing sight than the area of one of the larger gin-palaces on a wet night. There the homeless, houseless, mis-erables of both sexes, whether they have money or not, resort in numbers for a temporary shelter; aged women selling ballads and matches, cripples, little beggar-boys and girls, slaving idiots, pie-men, sandwich-men, apple and orange women, shell-fishmongers, huddled pell-mell, in draggled confusion. Never can human nature, one would imagine, take a more abject posture than is exhibited here; there is a character, an individuality, a family likeness, common to the whole race of sots; the pale, clayey, flaccid, clammy face, pinched in every feature: the weeping, ferret-like, lack-lustre eye, the unkempt hair, the slattern shawl, the untidy dress, the slipshod gait, too well betray the confirmed drunkard.

The noises, too, of the assembled toppers are hideous; appalling even when heard in an atmosphere of gin. Imprecations, execrations, oburgations, applications, until at length the patience of the publican, and the last copper of his customers are exhausted, when, rushing from behind his counter, assisted by his shopmen, he expels, *vi et armis*, the dilatory mob, dragging out by the heels or collars the dead drunkards, to nestle, as best they may, outside the inhospitable door.

Here, unobserved, may you contemplate the infinite varieties of men self-metaphorsed into beasts; soaker, tippler, toper, muddler, dram-drinker, beer-swiller, cordial-tippler, sot.

Here you may behold the barefoot child, hungry, naked, clay-faced, handing up on tiptoe that infernal bottle, which made it and keeps it what it is, and with which, when filled, it creeps home to its brutal father or infamous mother, the messenger of its own misery.

Here the steady *respectable* sot, the good customer, slides in, and *flings* down his throat the frequent dram: then, with an emphatic "hah!" of gratification, drops his money, nods to his friend, the landlord, and for a short interval disappears.

Here you may behold with pity and regret, and as much superadded virtuous indignation as the inward contemplation of your own continence may inspire, the flaunting Cyprian, in

over-dressed tawdriness, calling, in shameless voice, for a quartern of "pleasant-drinking" gin, which she liberally shares with two or three gentlemen, who are being educated for the bar of the criminal court. You may contrast her short-lived hey-day of prosperous sin with that row of miseries seated by the wall, whose charms are fled, and whose voices are husky, while they implore you to treat them with a glass of ale, or supplicate for the coppers they see you receive in change from the barman; and who are only permitted that wretched place of rest that they may *beg* for the benefit of the publican, and for his profit poison themselves with the alms of others.

AMERICA.

Our eastern borders behold the sun in all its splendor rising from the Atlantic, while the western shores are embraced in darkness by the billows of the Pacific. Our country has indeed a vast extent of territory, with the diversified climates of the globe. On the one hand, is the ever-smiling verdure of the beautiful and balmy south, and on the other, the sterile hills and sombre pine forests of the dreary north; and intermediate, the outstretched region where the chilling blasts of winter are succeeded by the zephyrs and the flowers of summer.

The snow-clad summits of her mountains look down upon the elemental war of the storm-clouds floating above the shrubless prairie, that realizes the obsolete notion of the earth being an immense plain; and, toward the ocean on the east and the west, upon the broad rich valleys where the father of waters, the "endless river," and the majestic Columbia with its hundred branches gently winds along, or rapidly rush on to mingle their waters with the waves of the Pacific, the gulf of Mexico, or the magnificent expanse of our northwestern Caspian seas.

Could the power of vision at once extend over our whole wide domain, what a grand, ennobling scene would be presented to a spectator standing upon one of the lofty peaks of the Rocky mountains, or, as Washington Irving aptly denominates it, "the crest of the world." And then to take, upon a summer day, a bird's-eye view of all our roads, canals, railroads, lakes and rivers—the innumerable postcoaches whirling along over our one hundred and thirty thousand miles of postroad; or steamers gliding magically along our waters; our locomotives shooting off like the comet upon its track; our rapid intercourse between the seaboard and the inland mari-

time cities; and our ships approaching and departing with the commerce of the world; with all the various, complicated movements of the country, town and city; and then, like Prior on Granger hill, to hear all the different musical and discordant sounds coming up to this "crest of the world," if they could comprehend the entire scene, from the bellowing of the buffalo, leading his shaggy hundreds over the prairie, to the roar of the cataract as it shakes the earth with its stupendous plunge, with all this beneath the eye and upon the ear well might the enraptured spectator exclaim, what a sublime panorama!

For variety, beauty, grandeur, and sublimity of scenery, what country can surpass our own; what country can equal the life-sustaining power that slumbers in her soil! With all her wealth, improvements and intelligence, and with our twenty millions of inhabitants, still we have but just commenced the settlements of our country, and are only on the borders of the mighty wilderness. Her undeveloped resources are capable of sustaining a free population of more than one hundred millions. A century hence, if permitted to enjoy the blessings of peace, the United States of America, with fifty stars upon her banner, may welcome, at the dawning of that New-Year's morn, no less than one hundred and twenty millions of happy freemen. How exalted may then be the intelligence and virtue of the people. The success of our efforts in the improvement of our schools, and the general diffusion of knowledge, enables us to make an estimate of what our posterity of the third generation are likely to become.

Active must be the ardent imagination that can picture the scene at a glance. The ideal landscape can not equal the reality, however lively may be the fancy. The idea of such a view as we have fancied to be beheld from the mountain top a hundred years from this day, can never be conveyed by words, the picture must be painted by the wonder-working power of the pencil of ideality.

"Our country! Such is thy physical greatness, and such the intellectual and moral power that now gives promise of a glorious destiny, far beyond all parallel in the annals of the world. For such a destiny may thy institutions be well sustained; and may a halo of glory play around the name of every man who honestly labors in behalf of his fellows and posterity, to uphold, purify, perpetuate and extend them.

BENEVOLENCE.—Benevolence is always a virtuous principle. Its operations always secure to others their natural rights; and it liberally superadds more than they are entitled to claim.

ships approaching and commerce of the world; complicated movements of a city; and then, like a bell, to hear all the different sounds coming up to the world," if they could commence, from the bellowing of his shaggy hundreds the roar of the cataract as with its stupendous plunge, with the eye and upon the enraptured spectator ex-
treme panorama!

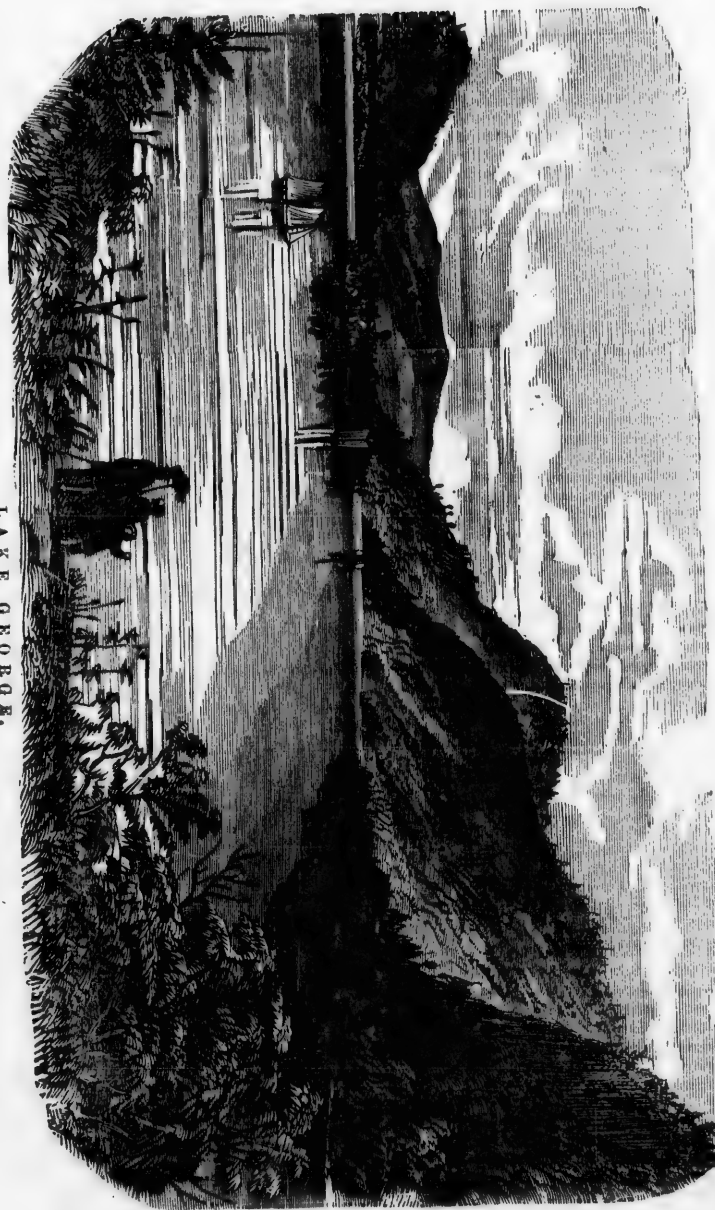
grandeur, and sublimity, country can surpass our can equal the life-sustaining in her soil! With her ornaments and intelligence, millions of inhabitants, commenced the settlement, and are only on the empty wilderness. Her un- are capable of sustaining of more than one hundred hence, if permitted to peace, the United States stars upon her banner, the dawning of that New- less than one hundred and happy freemen. How the intelligence and vir- The success of our efforts at of our schools, and the knowledge, enables us to of what our posterity of are likely to become.

The ardent imagination that we at a glance. The ideal equal the reality, however fancy. The idea of such fancied to be beheld from hundred years from this conveyed by words, the- nted by the wonder-work- cil of ideality.

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Benevolence is always a Its operations always se- natural rights; and it lib- ore than they are entitled

LAKE GEORGE.



THE WESTERN EMIGRANT.

BY MRS. L. H. SIGOURNEY.

AMID those forest shades that proudly reared
Their unshorn beauty toward the favoring skies,
An axe rang sharply. There, with vigorous arm,
Wrought a bold emigrant, while by his side
His little son with question and response
Beguiled the toil.

"Boy, thou hast never seen
Such glorious trees, and when their giant trunks
Fall, how the firm earth groans! Rememberest thou
The mighty river on whose breast we sailed
So many days on toward the setting sun?
Compared to that, our own Connecticut
Is but a creeping stream."

"Father, the brook
That by our door went singing, where I launched
My tiny boat with all the sportive boys,
When school was o'er, is dearer far to me
Than all these deep, broad waters. To my eye
They are as strangers. And those little trees
My mother planted in the garden bound
Of our first home, from which the fragrant peach
Fell in its ripening gold, were fairer sure
Than this dark forest shutting out the day."

"What ho! my little girl,"—and with light step,
A fairy creature hastened toward her sire,
And setting down the basket that contained
The noon's repast, looked upward to his face
With sweet, confiding smile.

"See, dearest, see
Yon bright-winged parroquet, and hear the song
Of that gay red-bird echoing through the trees,
Making rich music. Didst thou ever hear
In fair New England such a mellow tone?"

"I had a robin that did take the crumbs
Each night and morning, and his chirping voice
Did make me joyful, as I went to tend
My snow-drops. I was always laughing there.
In that first home. I should be happier now,
Methinks, if I could find among these dells
The same fresh violets."

Slow night drew on,
And round the rude hut of the emigrant,
The wrathful spirit of the autumn storm
Spoke bitter things. His wearied children slept,
And he, with head declined, sat listening long,
To the swollen waters of the Illinois,
Dashing against their shores. Starting, he spake:

"Wife! did I see thee brush away a tear?
Say, was it so? Thy heart was with the halls
Of thy nativity. Their sparkling lights,
Carpets and sofas, and admiring guests,
Befit thee better than these rugged walls
Of shapeless logs, and this lone hermit-home."

"No—no! All was so still around, methought,
Upon my ear that echoed hymn did steal,
Which 'mid the church where erst we paid our vows
So tuneful pealed. But tenderly thy voice
Dissolved the illusion"—and the gentle smile
Lighting her brow, the fond caress that soothed
Her waking infant, reassured his soul,
That wheresoe'er the pure affections dwell
And strike a healthful root, is happiness.

—Placid and grateful to his rest he sank;
But dreams, those wild magicians, which do play
Such pranks when Reason slumbers, tireless wrought
Their will with him. Up rose the busy mart
Of his own native city, roof and spire,
All glittering bright, in Fancy's frostwork ray.
Forth came remembered forms; with curving neck,
The steed his boyhood nurtured proudly neighed—
The favorite dog, exulting round his feet,
Frisked, with shrill, joyous bark; familiar doors
Flew open—greeting hands with his were linked
In friendship's grasp—he heard the keen debate
From congregated haunts, where mind with mind
Doth blend and brighten—and till morning roved
'Mid the loved scenery of his fatherland.

EXPULSION OF THE ACADIANS.

SOME dispute existing between the English
and the French, respecting the territorial limits
of both parties, the region about Hudson's
bay, and the province of Acadie, since called
Nova Scotia, to settle the matter, were ceded
to Great Britain in 1713.

Acadie was inhabited by an excellent French
population. When these good people found
their country yielded to England, and themselves
no longer subjects of the French king,
they were grieved to be forced to acknowledge
another master. They knew that the French
and English were hostile to each other, and
they dreaded to be compelled, some time or
other, to take up arms against Frenchmen;
they, therefore, entreated the English that
they might never be forced to so painful a service,
and might be excused from taking the
oath of allegiance.

This request received no special attention,
but, for a time, a kind forbearance was exercised
toward them. After a period of forty
years, the English government came to the
conclusion that these neutral French, as they
were called, might become dangerous to their
interests by taking part with the Canadian
French, their active enemies. On account of
this presumed danger, without the least alleged
provocation, or the least show of justice,
they took upon themselves to drive out of
their possessions this peaceable, prosperous,
and unoffending people.

was so still around, methought,
 The hymn did steal,
 Where erst we paid our vows
 But tenderly thy voice
 "—and the gentle smile
 The fond caress that soothed
 Measured his soul,
 A pure affection dwell
 In root, is happiness.
 Fatal to his rest he sank;
 Old magicians, which do play
 Reason slumbers, tireless wrought
 Up rose the busy mart
 To roof and spire,
 In Fancy's frostwork ray.
 Heared forms; with curving neck,
 And nurtured proudly neighed—
 Halting round his feet,
 Joyous bark; familiar doors
 Hands with his were linked
 —he heard the keen debate
 Aunts, where mind with mind
 —and till morning roved
 Of his fatherland.

OF THE ACADIANS.

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EXPULSION OF THE ACADIANS.

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The Acadians had no warning of their fate. At harvest-time they were ordered to assemble in a certain district, and being collected, were informed they were prisoners—that their lands, cattle, and moveables, were no longer their own, but were confiscated by government—that they might take what they could convey away, but must immediately quit the province.

In one single district, two hundred and fifty-five houses, as many barns, eleven mills, and one church, were destroyed. Ships were in readiness to convey the persecuted Acadians to different parts of the continent—to Louisiana, to French Guiana in South America, and to distant places in the then British provinces on the Atlantic.

These people had been remarkable for their industry, their skillful husbandry, their pure morals, and their exemplary piety. Their lands produced wheat and corn, potatoes and flax, abundantly. Their houses were convenient, and furnished with all things necessary to comfort. Their numerous flocks afforded the wool which was manufactured in the family for their clothing. They had no paper-money, and little silver or gold; and lived by simple exchange of commodities. So little contention arose among them, that courts and lawyers were needless; the wise and experienced decided their small differences. They were Catholics; the priests drew up their public acts, wrote their wills, and kept possession of the documents, until death called for the expulsion of them. To requite these services, the inhabitants allowed them one twenty-seventh of the harvest for their subsistence.

At the time of the dispersion, the Acadians were 18,000 in number. No want existed among them; the poor were few, and the prosperous cheerfully supported those. These unfortunate people were the victims of their own integrity. Had they taken the oath which demanded of them to violate the best affections, they might have retained their houses, their fields, and their flocks. Their good feelings demanded only the innocent liberty of neutrality.

In September, 1755, Colonel Winslow, an officer, usually resident at Marshfield, Plymouth county, Massachusetts, was sent with the king's commission, to demolish the property of the neutrals, and to expel them, without exception, from the province. Colonel Winslow deeply regretted that he should be employed in this cruel service. He knew, so he said, that they were of "the same species" with himself, and "it was disagreeable to his make and temper" to inflict pain. His first measure, on landing at St. Pre, was to make prisoners of several hundreds of the

most considerable of the men of the settlement. "In consequence of their earnest entreaties, the prisoners were permitted, ten at once, to return to visit their wretched families, and to look, for the last time, upon their beautiful fields, and their loved and lost homes."

These unhappy men bore their misfortune with firmness, until they were ordered on board the transport-ship, to be dispersed among people whose customs, language, and religion, were opposed to all they held dear and sacred.

On the 16th of September, the prisoners were drawn up six deep; and the young men, one hundred and sixty in number, were ordered to go on board the vessels. They refused to do this, unless their families might be permitted to accompany them. This was denied, and the soldiers were ordered to do their duty. The wretched Acadians no longer resisted, but marched from their chapel of St. Pre to the ships.

The road from the chapel to the shore, just one mile in length, was crowded with women and children, who, on their knees, and with eyes and hands raised to Heaven, entreated blessings on their young friends, so unmercifully torn from them. Some of the latter broke out into bitter lamentations; others prayed aloud; and another portion sang mournful hymns, as they took their way to the ships. The seniors formed another detachment, and their departure occasioned a similar scene of distress. Other vessels arrived, and their wives and children followed. Their dwellings were burnt before their eyes, and the work of destruction was complete. Eighteen thousand souls were cast forth upon the pitiless world. Desolate and depopulated was the beautiful tract they had occupied: their homes lay smoking in ruins; the cattle, abandoned by their protectors, assembled about the forsaken dwelling-places, anxiously seeking their wonted masters; and all night long the faithful watch-dogs howled for the hands that had fed, and the roofs that had sheltered them.

The distress of one family will serve to exhibit the sufferings of these refugees. There was among them a notary-public, named Rene Le Blanc. He loved the English. On one occasion, the Indians would have persuaded him to assist them, in an attempt upon the English. He refused, and the Indians, in resentment, made him prisoner, and detained him four years.

At the time of the expulsion, Le Blanc was living at an advanced age. His fidelity to the English, and his sufferings on that account, deserved favor, but he found none. Le Blanc had twenty children, and about one

hundred and fifty grand-children. These were embarked in different vessels, and scattered in different provinces. The unfortunate old man was set ashore in New York, with his wife, and the two youngest of their children. Love for those that were scattered, led him from one strange city to another. He reached Philadelphia. There he found three of his children, and there, despairing to recover the rest, in penury and sorrow, he sank into his grave. It may be questioned, if the history of the world exhibits a more heart-rending incident than the exile of this amiable and unhappy people. When the traveller contemplates the noble dikes reared by their industry—while he walks beneath the shade of their abundant orchards, and stands over the ruins of their cottages, or muses among their graves, his imagination goes back to a scene of rural felicity and purity seldom seen in the world, and his heart melts at the sudden and dreadful fate of the Acadians.

AGRICULTURAL SCIENCE.

THE great mountain chains which ridge and furrow the earth's surface, consist of one and the same material, viz., granite. It is of the oldest or primary formation; it is also one of the hardest and most durable rocks; yet a very great portion of all soils have been derived from the disintegration of granite. Rocks, originally of many tons' weight, have been reduced to pebbles—pebbles to sand—sand to impalpable powder.

Granite is composed of three minerals, viz., quartz, felspar, and mica. Quartz is the very hard flinty part of granite, it is often found alone and pure, and is frequently called rock crystal, white flint rock, &c. It is, however, of different colors—white, rose, and smoky. In its chymical qualities it is considered of an acid nature. It composes much the larger portion of most soils, and is found nearly pure in the form of beautiful white sand upon the shores of seas, lakes, and many ponds. In agricultural chymistry, it is termed *silex*, or *silica*.

Silex (quartz) enters into the composition of all plants; were it not for this mineral substance, to give strength or stamina to trees and upright plants, they would, if they could grow without it, all be trailing plants, unable to rear themselves from the ground, and have as little substance in them, as the potato-plant has, that vegetates and grows in the darkened cellar. The ashes of land-plants yield *silex* in large quantity, and it is evidently essential to the growth of plants, as it forms the skeleton

for the sap-vessels, and it also forms the entire skin (glaze) of the corn-stalk, the stems of grapes, the straw of wheat and other grains, and on some of the ratans and bamboos, there is such a hard coating as to emit sparks when struck by a flint.

Silex is not fusible alone in the hottest fire, nor soluble in pure water, and but slightly soluble in strong acids; but if mixed in certain proportions with potash or soda, and subjected to a strong heat, it readily melts and forms the well-known substance, glass. If mixed in the proportion of one part *silex* and two parts potash, it can be easily melted, and forms a soluble glass, that is, it can be readily dissolved in boiling water like sugar or salt; in this way *silex* is artificially rendered soluble.

Nature, also, has a way of her own, in dissolving the "white flint rock" so as to prepare it to be taken up by the roots of plants, for the purpose of forming the skeleton, for the support of the sap-vessels, and for making the glaze upon the straw of wheat, &c., which is affected by the laws of crystallization, and in point of fact is a perfect coating of glass; the object of this coating is to protect the plant against the attacks of insects, and to give strength to the stem.

It has been observed, glass is only a composition of *silex* or sand and soda or potash, fused in the hot fire of a glass manufactory. That, coating the stems of grain, grass, &c., is produced in the soil, simply by a chymical union of silica and potash or soda. The potash and soda are derived from felspar. Felspar is one of the constituents of granite. It is not so hard, although it very much resembles quartz, but it differs widely from it in its chymical qualities, being a compound of *silex*, alumina (clay), and potash; there is from twelve to fifteen per cent. of potash in felspar, that is, a chymist, by analyzing 100 lbs. of felspar, can obtain 12 or 15 lbs. of potash, or soda, as some kinds yield potash, others soda. The potash of commerce is derived from wood-ashes—soda from the ash of sea-plants; potash and grease make soft soap—soda and grease hard soap; they have many qualities in common: both will unite with oils or fat—both will neutralize acids—both will dissolve *silex*—and both are alkalies. Mica, the other constituent of granite, contains six or seven per cent. of potash. These three minerals, as mixed up in our granite rocks, yield about seven per cent. of potash when analyzed.

Acids and alkalies react upon each other; the decomposition or rotting of vegetable matters always produces carbonic and vegetable acids; in our forests this process is always going on from the rotting of the fallen leaves,

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twigs, branches, and trunks of trees. The water of the soil holding these acids in solution, they act upon and dissolve the potash in the felspar and mica portion of the soil; and as much the larger portion of our soils are derived from the disintegrated and finely-pulverized granite, it contains a large amount of potash in the stones, pebbles, and finer parts of the soil. The potash being thus liberated or dissolved by the acids, in turn acts upon and dissolves a portion of the silex; and in solution they are taken up by the rootlets of plants, and, as has been already observed, by the laws of segregation and crystallization, the silex is deposited upon the surface of many plants, in a hard coating or glaze, and every tube or sap-vessel, in the trunks and branches of trees and plants, is lined with a coating of the same material.

It is in this way, the potash, and the sandy or gritty portion we find left after burning wood, are derived from the soil.

One of the most indispensable inorganic constituents of all land-plants, is potash. There is not a single plant in the field or the wood, the ashes of which does not contain it in one state of combination or another, and often in very large quantity—so much so, that the belief was once entertained that plants had the power of generating it within themselves; but more modern researches have most clearly pointed out the source whence it is derived, and the manner in which plants obtain it.

The following are a few familiar illustrations of the solvent properties of potash. Vats and tubs, that have long been used for leaching ashes, have the silica that lined every sap-vessel of the wood, and gave strength and solidity to it, dissolved out by the action of the potash. The woody fibre being insoluble by the alkali is left behind, and very much resembles flax, and it is nearly identical with the fibre of flax and cotton. Chymists have given to this woody fibre, the name of lignin. Paper-makers, in manufacturing paper from straw and coarse grasses, &c., take advantage of the solvent powers of the alkalies, potash, soda, or lime, to decompose the silica or hard coating upon the straw, &c. Thread and yarn spun from flax, are boiled in lye to dissolve the gritty matter and soften the threads.

GOODNESS does not more certainly make men happy, than happiness makes them good. We must distinguish between felicity and prosperity; for prosperity leads often to ambition, and ambition to disappointment; the course is then over, the wheel turns round but once; while the reaction of goodness and happiness is perpetual.

RESEARCHES ON FOOD.

Nothing but accurate scientific investigation can ever teach the proper treatment of the human system either in health or in disease. No length of experience of vague sensations, following up the taking of certain kinds of food, exercise, or drugs, is enough to determine the precise virtues of these appliances. There is only one sure way of finding out the exact uses and functions of what we eat, or what acts on our bodies; and that is, to determine precisely on the one hand the substances used by nature in the vital processes, and on the other, the composition of the materials that we supply to the system. If we determine first the wants of the body, and next the resources of the world, and select the latter exactly to meet the former, we will learn on truly rational grounds the way of keeping up the vigor of our physical framework.

Baron Liebig is at present conducting a series of researches on the nutrition of animals, on exactly the same principle that he and others have proceeded with respect to the nourishment of plants. A plant is analyzed, and found to contain certain constant elements; some of these derived from air and water, others of an earthy kind derived from the solid soil. The requirements of the plant being thus laid open, it can be seen by a similar investigation if a soil contains in proper form these precise elements. If it contain some of them, and not others, then what is wanting is communicated, and no more. This is true insight and rational practice. All other schemes, founded on what is called "farming experience," can be at best mere probabilities.

Liebig has just presented to the world his researches on the chymistry of food, which is a most valuable contribution to the accurate knowledge of the action of food on the system. It is wholly devoted to the constitution of the flesh or muscles of the body, which form one of the largest and most important constituents of the system. The fleshy masses, which make the soft parts between the skin and the deep-lying bones of the skeleton, are the prime forces of the moving organs—the source of strength, energy, and every form of bodily activity. The first consequence of derangement in the constitution of the flesh is a loss of working vigor; and this is apt to be followed up with disorders in the other parts of the system—the stomach, lungs, brain, &c. It is of prime importance, therefore, that we should know in a rigorous scientific way (which means in the *one perfect way*) what is necessary for preserving or restoring the elements which enter into healthy flesh.

Liebig, accordingly, has set to work, by chymical analysis, to find what are the substances that are combined together in animal muscle. Some of the substances that he has found are entirely new; and he confesses that there yet remain one or two constituents which he has not sufficiently investigated, so as to be able to say what they are.

Flesh is made up of solid fibres, cells, membranes—all of an organized structure—with fat; it also contains a very large quantity of liquid matter, called the juice of the flesh. This juice is a solution of a great many elements or substances in water; the weight of the water itself being many times that of all the dissolved substances put together. Liebig's investigations have been directed to the analysis of these substances. He takes a mass of ten pounds of newly-killed flesh, reduces it to a fine mince, mixes it with water, and squeezes the whole mass through a linen bag, until he has extracted as much of the liquid contents as possible, and left only the solid portions behind. When the fluid thus obtained is heated up to a certain temperature, the *albumen*, which is one constituent, coagulates, and can be separated. At a still higher temperature, the *coloring matter*, which makes the redness of raw flesh, also coagulates, and is removed. The separation of these simplifies the compound. The remaining fluid is always of an acid character, showing that it contains, with its other ingredients, one or more acid substances, in a free or unneutralized state. A part of the inquiry is to find what these acids are: accordingly, an alkali (baryta) is poured in to combine with and precipitate them. The precipitate is withdrawn and examined, and found to consist of *phosphates*, which phosphates have the double base of baryta and magnesia, which last, therefore, must have been present in the juice. It is thus shown that *phosphoric acid* is an essential constituent of the juice of muscle.

The liquid that is freed from filtration from these precipitated phosphates is slowly evaporated, until at last crystals, in the form of colorless needles, appear at the bottom. These crystals, when examined by chymical tests, are found to be an entirely new substance, with distinct and specific properties, which Liebig has fully investigated; and it has received the name of *kreatine*, from the Greek word for flesh. This *kreatine*, therefore, is an invariable constituent of the muscular fluid. Its amount in any animal is greatest when there is least fat; as fat accumulates, it diminishes.

The physical properties of a substance are its specific gravity, texture, color, and appearance. The chymical properties are its

composition, or the proportions of its elementary constituents, and its chymical action upon other bodies, such as acids, alkalies, and tests of all sorts. These properties Liebig has detailed in reference to the new substance, and by them a key will be found to its uses in the living body.

The action of a strong acid on *kreatine* creates a second substance hitherto unknown to chymists, which is alkaline in its nature, called by Liebig *kreatinine*. This substance, however, may not only be produced from *kreatine*, but it is found in the system of another permanent constituent, and as such its properties deserve and have received a distinct investigation.

The original *kreatine*, resolved by an acid into *kreatinine*, is next resolved by baryta into two other elements, one of them *urea*, already well known; but the other is a completely new substance of the alkaline character, named *sarcosine*, and apparently worthy of being studied. Here, therefore, from one crystalline deposit there arises three *organic compounds*, that have all something to do with human vitality.

We are not yet done with the original liquid. After the crystals of *kreatine* are deposited, there is a liquor still remaining. By adding alcohol to it, it is made to give a new deposit in white foliated crystals. These are separated by filtration, and examined, and yield a fourth new substance of an acid character, called by Liebig *inosinic acid*. This is a very remarkable element. The flavor of the meat seems to reside in it: when it is acted on by a high heat, it gives off the very smell of roasting meat.

Recurring again to the unexhausted mother liquid, and adding more alcohol, a new separation takes place; a thick sirupy substance falls to the bottom, and a lighter liquid floats above. The separate examination of these brings out additional elements. Here is found the *kreatinine* natural to the muscle. There is also now found *lactate of potash*; and it turns out that *lactic acid*, or the acid of sour milk, is a constant element of muscular juice, as well as the phosphoric acid that came out at an earlier stage. The lactates of flesh receive from Liebig a separate investigation.

After settling the characters of these great organic constituents—*kreatine*, *kreatinine*, *sarcosine*, *inosinic acid*—and the compounds of *lactic acid*, he now turns to what are called the inorganic elements, such as phosphoric acid, potash, and other alkalies, and finds a curious speculation upon the presence and mutual actions of the *lactic* and *phosphoric acids*. The great idea of the speculation is, that *lactic acid* is the substance that directly supports respiration, or whose consumption

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gives the animal heat; and that the sugar and starch taken in our food are changed into lactic acid, in order to become respiratory elements. In fact, the use of sugar is to supply the lactic acid constituent, which has to serve this and other purposes in the body. Another very refined speculation is offered by the author, founded on the fact, that the alkali contained in the flesh is potash, and the alkali contained in the blood is soda. He shows how the chymical properties of phosphoric acid and soda, which go together in the blood, would explain the process whereby nature makes the exchange of carbonic acid for pure oxygen, in the final act of the respiratory process.

These elements do not exhaust the constituents of muscle, and it will take much additional study to follow out all their functions in the human body. Moreover, muscle, although a very important tissue, is only one out of many; and it will be necessary to go through a similar examination of nerve and other tissues before the chymical actions involved in the animal system are fully known. But in the meantime, Liebig draws some very important practical inferences from the discoveries already made.

In the first place, he shows how the boiling of meat acts upon the various constituents of the juice. We require, for the support of our muscle, not merely the fibrous matter of animal flesh, but all the array of the albumen, lactates, phosphates, kreatine, &c., already mentioned: if any of these are allowed to escape, we are deprived of some needful element, and our system suffers. Now, cold water can dissolve the great mass of these important ingredients, so that if meat is put into cold water, and slowly boiled up, the water will have carried off all the albumen and several other substances, and the remaining beef will be a kind of husk, insufficient to nourish the system, unless the water it has been boiled in is taken at the same time in the form of soup. To boil beef without losing the nutritious and savory elements, Liebig gives the following directions: the water is, in the first place, to be put into a brisk boiling state; into this boiling water the meat should be plunged, and allowed to lie for a few minutes; it is then taken out, and cold water is to be poured into the boiler till the heat be reduced far below boiling, or to about 160 degrees; the meat is then put in again, and kept in the water at this temperature for two or three hours. Everything is in this way effected that can render the flesh pleasant and wholesome as food. The contact with the boiling water at the outset coagulates the albumen of the flesh all round the surface of the meat, and closes up its pores

with a solid wall, that none of the internal juices can pass through, and the meat is preserved in all its integrity while undergoing the action of the heat.

On the other hand, when we wish to have a *rich soup*, we must take means for thoroughly extracting the various elements of the fleshy juice, for these elements are the essential portion of a soup. A perfect soup would be a mixture of all the soluble constituents of the muscle—in fact, Liebig's original mother liquor, which he wrought upon to bring out all the various substances already enumerated. Accordingly, the plan of making soup is as follows:—

“When one pound of lean beef, free of fat, and separated from the bones, in the finely-chopped state in which it is used for beef-sausages or mince-meat, is uniformly mixed with its own weight of cold water, slowly heated to boiling, and the liquid, after boiling briskly for a minute or two, is strained through a cloth from the coagulated albumen and the fibrine, now become hard and horny, we obtain an equal weight of the most aromatic soup, of such strength as can be obtained even by boiling for hours from a piece of flesh. When mixed with salt, and the other usual additions by which soup is usually seasoned, and tinged somewhat darker by means of roasted onions or burnt sugar, it forms the very best soup that can be prepared from one pound of flesh.”

An extract of meat thus prepared is found to be an invaluable provision for an army in active service. Administered along with a little wine to wounded soldiers, it immediately restores their strength, exhausted by loss of blood, and enables them to sustain the fatigue of removal to the nearest hospital. Of course what is so useful in this extreme case must be useful in thousands of minor occasions of bodily prostration. The loss of strength means the loss of the substances that support vitality, such as these very ingredients of fleshy juice. The fleshy fibre itself is wasted more slowly than the substances that float in the liquid that invests it; so that, in fact, a supply of these matters has a more instantaneous action than any other refreshment. We can thus explain the effect of soups upon convalescent patients. No doubt the perfect soup of Liebig's description would be found to have a far greater strengthening power than the generality of those in common use.

There is one other principle of very great consequence stated. It is, that the gastric juice of the stomach, which dissolves the solid food into a liquid pulp, has nearly the same ingredients as the juice of flesh; so that the power of digestion will be very much

affected by the supply of the constituents of juice to the system. Hence a good flesh-extract soup, besides giving materials to the muscle, provides the solvent liquid of the stomach, and facilitates digestion. To people suffering from indigestion in the sense of deficiency in the gastric juice, the supply of this material is the natural remedy. Another useful hint is also suggested by this connexion of stomach and muscle. The digestion of the food, and the exertion of the muscles, consume the same ingredients, so that both operations can not well be sustained together beyond a certain limit. Moreover, it naturally follows that rest during one operation will cause increase of energy in the other. During the height of the digestive action, muscular exertion can not well be afforded, unless there is a great overplus of the common aliment. It is well known that when digestion is weak, rest after meals is necessary, and that excessive exercise unfits the stomach for its work. The explanation now afforded may supply practical wisdom on this head to all men.

Liebig has also pointed out the effect that the salting of meat has on the precious constituents of its juice. The salt withdraws a great portion of these dissolved matters, which are thrown away with the brine. The injuriousness of a long course of salt provisions is thus distinctly accounted for.

In these investigations, Liebig has made use of flesh derived from a great range of animals, and has determined the comparative richness of each in the various substances in question. He has tried the flesh of ox, roe deer, horse, hare, fox, fowls, fishes, &c. In this way he is likely to furnish, what has been sought for in vain by other methods, a comparison of the nutritive qualities of the different kinds of food. No man that understands the real difficulty of settling such a point, can put the slightest faith in any of the tables of the comparative digestibility or nutritiveness of substances that have hitherto been put forth in books of medicine or dietetics.

THE HINDOO SCHOLAR.

Our engraving represents one of those little girls in India who are receiving Christian education in the female schools which have been established in that country. The engraving is taken from a portrait of one of the scholars attending the schools in Calcutta: she is represented in the native female dress, which is called a "sarric." The sarric is a long piece of white muslin, folded round the body and

thrown over the head and shoulders. The book in her right hand shows that she is a scholar: the sight of a girl with a book in her hand, however common among us, was till lately very unusual in India. In her left hand she holds one of the work-bags sent out by the ladies of England as rewards for the best behaved girls.

The contemplation of this subject, will suggest to every one some of the advantages to be derived from Christianizing India; and we hope the time is not far distant, when schools in India will be as common as they are among us. Such a state of things would gladden the heart of every philanthropist, and would elevate and ennoble a people who only want proper education and instruction to be great and good.

LYCURGUS.

No man ever more truly deserved the title of reformer, than did Lycurgus, the Spartan lawgiver; and there have lived few men whose lives and actions were of a more interesting character.

Lycurgus flourished about 900 years before the Christian era, or about 2,700 years ago. As may be supposed, the incidents of his life are neither so numerous nor so well authenticated as would be desirable: but if there be doubts in regard to his personal history, there can be none in regard to the reforms he brought about, and the institutions he established.

Lycurgus is commonly believed to have been a son of Eunomus, of the royal house of Lacedæmon, but not in the line of direct succession. The death of his brother appeared to give him a title to the crown; but his widow giving promise of an heir to the throne, Lycurgus assumed the government as regent.

The brother's widow preferring the queenly dignity to that of queen-mother proposed to destroy the yet unborn heir to the throne of Sparta, and share the crown with Lycurgus. Stiffing his indignation at such an infamous proposal, he yielded a seeming assent; but as procuring an abortion, though sometimes practised, was attended with serious danger to the health of the mother, Lycurgus persuaded her to do no violence to the course of nature—since, if born, the infant might be easily disposed of.

As the time for the birth of the child drew nigh, Lycurgus placed trusty attendants around the person of the queen, with orders to bring him the child, if it proved a son, as soon as born. This happened while he was

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The Hindoo Scholar.

sitting at table, with the magistrates of Sparta. The newborn prince was brought to him, and taking the infant in his arms, he immediately named it Charilaus, and proclaimed him king of Sparta—after which, as regent, he provided for his proper care and education.

There was thus thrown upon this noble prince two great cares—the government of the realm as regent, and the protection of the lawful sovereign. With these cares came also a danger from which the sensitive soul of Lycurgus shrunk with dread. The life of this infant alone stood between him and the supreme power. If the child should die, he would doubtless be accused of its murder, from motives of ambition.

Lycurgus resolved to avoid this danger, and do his country a great service at the same time. During the minority of the king, leaving the administration of the state in the hands of proper officers, he became a voluntary exile, travelling in various parts of Greece, in Egypt, and, if we believe the historians, in India—for Egypt and India were, in the early ages of Greece, considered as the fountains of science and wisdom.

During this exile, and these travels, Lycurgus perfected a plan for the reformation of the institutions of his country, which, when Charilaus, his ward, had arrived at maturity, he returned to put in practice. And reforms were greatly needed. Sparta had fallen into a deplorable situation.

The soil had become gradually monopolized by the rich landlords who lived in luxury, while the great mass of the people, being without land, were poor, oppressed, and degraded; and were often in danger of starvation. Such an unnatural state of things enervated the rich, crushed down and dispirited the poor, provoked discontent, outrages, and rebellions, which produced despotism and tyranny, and threatened the entire ruin of the country.

Writers have uniformly expressed astonishment that Lycurgus should have had sufficient power and influence to correct these great abuses in the state. But when it is considered that he was the uncle of the king; that he had governed the country as regent; that he was entitled to the gratitude of the sovereign and of the people, on account of the conduct we have narrated; and that, by his foreign travels and study, he had required the respect due to superior wisdom; and when, to these considerations, we add the fact that in common with all the reformers and legislators of past ages, he invoked the authority of religion, we shall not be astonished at the result of his efforts in remodeling the institutions of his country. We must consider, also, that the free citizens of Lacedæmon

did not number more than two or three hundred thousand.

Returning from the feet of the Bramins and the temples of Egypt, Lycurgus set himself steadily at the great work of reform. First he visited the Delphic oracle, and the Spartans heard with veneration, a sentence they were already well disposed to believe—that Lycurgus, in wisdom, transcended the common level of humanity. He then secured a considerable party of the best citizens of Sparta, and though he met with an opposition so violent as at times to threaten his life, his firmness and courage at length triumphed over every obstacle, and he established laws and institutions for Sparta, which remained for many centuries, and which gave her great renown in all succeeding times.

The first object was to reform the great and fundamental evil, the monopoly of wealth by a few, which necessarily reduced the great body of the people to extreme poverty. At a single blow, aided by the king, a senate which he had established, consisting of the most popular men in the state, and the voice of the people, Lycurgus destroyed the existing titles to large tracts of land, vested in a few individuals, and the soil of Lacedæmon, as the property of the state, was divided among the people, and their rights in the soil were guarded by such provisions that no family could be deprived of the means of support. We are not particularly informed of the difficulties which attended this reform, but it made the way easy for every other.

In the government, the office of king was retained. It was one of dignity and respect—but that was paid to the office, rather than the man. The monarch assumed none of the trappings or state of royalty—he dressed like the common people, and dined with them at the common public table. As commander-in-chief of the army he exercised the greatest authority.

Thirty senators were chosen by a free election, which was curiously managed. Several judges were placed in a room where they could hear but not see the whole assembly of the people. The candidates then presented themselves successively before the people, and he who got the greatest applause, the judges declared to be elected.

The grand reform of a fair division of the soil among the people having been carried out, the artificial distinction of wealth was at once abolished, and poverty was unknown. The whole country looked, as Lycurgus himself observed, like a heritage newly shared among many brethren. The removal of poverty and riches, in real estate, was made the more complete by banishing useless arts and luxuries, and even money—for Lycurgus

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it served in so small a state the common pur-
poses of a circulating medium, or measure of
exchange, presented no temptation to hoard
or accumulate.

Let us look now at the customs and insti-
tutions which this extraordinary man founded.
The Spartan institutions were pervaded by
one principle. The citizen is born, lives, and
is ready to die, for the state. His substance,
time, strength, faculties, and affections, are
dedicated to its service. Its welfare is his
happiness, its glory, his honor. Patriotism
was the Spartan's leading virtue.

When a child was born, he was not allow-
ed to live if so weakly or deformed as not
likely to be capable of performing all the
duties of a citizen, and transmitting the full
vigor of manhood to his posterity; and as
much pains were taken to insure a good breed
of men, as are now employed in improving
the races of inferior animals.

The infant, until the age of seven, was left
to the care of its parents, under certain estab-
lished rules of treatment, calculated to protect
them from the mischievous indulgence of
parental tenderness.

At seven, they were sent to the public
schools, which were under the superintend-
ence of the elders, who were assisted by the
picked young men of the nation. The edu-
cation of the boys consisted of various gym-
nastic and military exercises; they were also
taught music and dancing. The songs of the
Spartans contained the greater part of their
literature, their history, and perhaps their re-
ligion. Their exercises were conducted with
all the rigor of military discipline, and were
such as to give them strength, energy, and
the greatest powers of endurance. They
were taught habitually to despise danger, to
exercise caution, to endure fatigue, and to
brave torture and death with unflinching
fortitude. There has never been seen a finer
race of men, gifted with more vigor, grace,
and agility, than the Spartans; and they were
consequently invincible as soldiers.

From the time the young Spartan left the
lap of his mother for the public schools, his
life was a continued exercise for the develop-
ment of Spartan qualities. He lived on
coarse and scanty fare, and this was often
withheld; he wore a thin dress in the depth
of winter; slept on a bed of reeds, gathered
by himself from the Eurotas; fought with
his comrades; received stripes from his gov-
ernors, as an exercise rather than a punish-
ment; foraged for himself, in spite of the
vigilance used to prevent or detect him, and
was known to die rather than discover his
plunder, or submit to a public flogging at the
shrine of Diana.

The cultivation of music, poetry, and a
sharp and ready wit; and extreme modesty,
obedience, and reverence for age, were the
intellectual and moral characteristics of this
nation.

All the Spartans dined at public tables, to
which each man sent his contribution of pro-
visions. Men were admitted to these daily
public feasts by ballot, requiring unanimous
consent, and no one elected, not even the king,
could dine at home without incurring a fine.
These feasts were enlivened by pleasantries
and mirth, but never profaned by impure con-
versation. At the age of sixty, the military
life closed; and the aged men either employ-
ed themselves in superintending the affairs
of education, or passed their time pleasantly
in social conversation.

"Victory or death" was the Spartan's
watch-word. The Spartan mother sent her
son to battle, with the injunction to bring his
shield home, or be borne home upon it. No
matter what the odds of numbers, the Spartan
never turned his back to an enemy. He who
did so was publicly disgraced—excluded from
all society, and forced to wear in public a
ridiculous costume, and be a mark for scorn and
insult—a disgrace worse than death.

Sparta was at all times like a camp—all
her men were soldiers. War was the element
in which the Spartan breathed most freely,
and enjoyed the fullest consciousness of his
existence. He dressed for battle as for a
feast—he went into action singing martial
songs, and with every appearance of gay en-
thusiasm, as if joining in a public festival.

The Spartan women were held in peculiar
esteem, and enjoyed a degree of freedom and
social consideration contrasting strongly with
the general condition of the sex in the eastern
world. Their education was intended to pro-
mote the highest physical development, and
to fit them to be mothers to heroes. The
Spartan women were celebrated for chastity,
and their matrons appeared seldom in public,
but yet exercised a strong influence in all
public affairs.

The Spartans were very religious, and the
luxuries they denied themselves, they lavished
on the temples of the gods, and displayed in
processions in their honor; for in no part of
Greece were religious ceremonies more splen-
did, or temples more magnificent.

Such were the institutions and manners
formed by Lycurgus. When he had seen
them in fair and successful operation, in his
old age, he told his assembled countrymen
that there was yet one thing upon which he
wished to consult the sacred and infallible
oracle at Delphos; and he made them take
a solemn oath to keep his laws until he re-
turned to Sparta. Arrived at Delphos, he

sent back word that the oracle had said that Sparta should be prosperous as long as her people observed his laws. Then, that the oath, taken at his departure, might bind them for ever, he determined never to return.

Lycurgus died in exile; when and where is not known; though it is said that he ended his life by voluntary starvation.

THE NESTS OF FISHES.

ALMOST all the higher classes of animals, assiduously perform the duties of parents to their young. They nurse, and feed, and protect them till they are able to provide for themselves. But many of the inferior animals, on the other hand, never know or care for their offspring. Not a few of them indeed, as the insect tribe, bestow great pains in constructing nests for the eggs of their future young, and even provide and store up the food necessary for them; but here all their solicitude ends; and in many instances the parents are dead, before their young come into existence. Aquatic animals exhibit, what on a casual view, would appear great carelessness in this respect. Fish deposit their spawn almost at random, and leave their ova to be hatched by the elements, and their young to provide for themselves. They form no nest, or a very rude one—the sand of the seashore, the small pebbles of the river or lake, or leaves of plants, or sea-weeds, receive their minute eggs. These are hurriedly and rudely covered up, if deposited in furrows of the sand, or they adhere to stones or weeds, by means of a gluey mucilage by which they are enveloped. When the young fry are developed, they associate together in shoals, and roam about amid the shallow waters untended and unprotected by the larger fish, nay, sometimes even preyed upon by their own progenitors. This we might be apt to think extreme indifference, and an outrage on the great law of paternal endearment; but a little reflection will show that it is a wise adjustment of nature. In such an unstable element as water, continually agitated by currents and incessantly changing its place, it would have been impossible for a parent fish, to have kept its young family around it, or even if it could, to have afforded them any protection. Think too, of a codfish surrounded by several millions of its young—the offspring of one single season! Or of an immense shoal of herrings, with each parent taking charge of its two or three millions of young, and distinguishing each among the surrounding myriads! The salmon comes into fresh-water rivers to depos-

ite its spawn high up the stream; but its nature requires that it should return to the ocean again long before its young are able to travel: and the same remark applies to many migratory fishes, which leave the deep waters—their usual haunt—and come for a short space to the shallow water to spawn.

Yet fishes, obedient to the great law of nature, show much solicitude about selecting the proper place for their spawn and future young. Every year the herring in countless shoals makes a long journey, it is supposed, from the deep seas, to the shallow bays and inlets; and the salmon leaves the sea, toils up the current of the river with incredible perseverance and force, overcoming the falls and rapids, till it gains the smooth and shallow source where, amid the sand, the spawn is deposited, and where the future young may sport in safety amid the sunny rills, till they gain sufficient strength to swim down the stream. Some fishes, however, really make a kind of nest in the water, and assiduously tend their ova till they are hatched. This is the case with the stickleback, which constructs a nest made of pieces of grass, and straw, fixed among the pebbles of the stream which they inhabit. M. Coste procured some of these fishes, and putting them into basins filled with water, and the proper materials of their nests, watched their progress, a minute and very curious detail of which he lately submitted to the Academy of Sciences at Paris. The sticklebacks having selected a proper spot, set about constructing their nests. "I saw," says he, "each of the males that were engaged in this work, heap up in the place, the selected pieces of grass of every kind, which he often brought from a great distance, seizing them with his mouth; and of these he began to form a kind of carpet. But as the materials which form the first part of his edifice might be carried away by the movements, or oscillation of the water, he had the precaution to bring some sand, with which he filled his mouth, and deposited it on the nest, in order to keep it in its place. Then, in order to make all the substances thus brought together adhere to each other, he pressed his body against them, sliding slowly, as if by a kind of vibratory creeping, and in this way glued them together by means of the mucus which exudes from his skin. By this operation, the first collected materials form a kind of foundation or solid floor, on which the rest of the edifice is to be reared. The execution of this, he continues with a feverish perseverance and agitation. In order to satisfy himself that all the parts are sufficiently united, he agitates his pectoral fins with great rapidity, in such a manner as to produce currents directed against the nest; and if he notices

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that the pieces of grass are moved, he presses them down with his snout, heaps sand upon them, flattens them, and glues them together again. When the process has reached this point, he chooses more solid materials—he seizes small pieces of wood or straws in his mouth, and presses them into the thick places, or on the surface of the first construction. If he finds, when attempting to introduce them, that the position does not sufficiently answer the purpose, he draws them out again, seizes them at another part, again inserts them, and pushes them forward, until he ascertains that he has made the best possible use of them. Occasionally, however, in spite of all his care, there are portions which owing to their shape, will not conform to the general plan. These he draws out, carries to a distance, and abandons, and proceeds to select others. When he has succeeded in building the floor, and side-walls, he then undertakes the roof, which is constructed of the same materials, carefully glued and compacted together, by the same vibratory pressure of his body. Meanwhile he takes care to secure an opening in the centre of the nest, by repeatedly thrusting in his head, and the greater part of his body. The nest being thus finished, the male, which is distinguished by his vivid coloring, darts out and invites a female to deposit her eggs in the place which he has just prepared for their reception. The female enters, and having deposited her ova in the cavity, darts out at the opposite side at which she entered, and thus makes an open passage through both sides of the nest. Several females in succession are thus invited to deposit their spawn; and thus the nest becomes a rich magazine of ova. The male now becomes the sole guardian of this deposit; for not only do the females take no care of it, but they become its formidable enemies—forming part of those numerous coalitions which attempt to plunder it, and satisfy their voracious appetite, by devouring the ova. In his defensive exertions, no obstacle can divert him, or daunt his courage, during the whole month requisite for the development of the ova. In order to strengthen the nest, he now covers it with stones, the size of which is sometimes equal to half his body, and which he moves along with great labor. In this process he always reserves one or more openings, through which he often drives currents of water, by the rapid motions of his fins—these currents seem to be necessary in clearing away objects from the eggs, for if not thus cleansed, they are found all to perish. It is wonderful to see with what courage he beats away successive numbers of his foes, striking them with his snout, and erecting his long sharp spines. Sometimes, when about to be overpowered with numbers, he resorts

to stratagem, and darts suddenly out of his nest, as if in pursuit of some prey. This frequently deceives the attacking sticklebacks, and they rush after him, in hopes of sharing the prey; and thus they are deceived from the nest. As the period of hatching draws to a close, his assiduity increases; he removes the stones, to give more easy access to the water, enlarges the openings, increases the frequency of the currents, and moves the eggs nearer the surface, or carries them deeper, according as circumstances require. Finally, when the eggs are hatched, he still continues to watch over the young in his nest, and does not allow them to go at liberty, till they have become sufficiently active to provide the means of their own preservation.

THE LAMA.

THE lama is the only animal associated with man, and undebaased by the contact. The lama will bear neither beating nor ill-treatment. They go in troops, an Indian going a long distance ahead as a guide. If tired, they stop, and the Indian stops also. If the delay is great, the Indian, becoming uneasy toward sunset, resolves on supplicating the beasts to resume their journey. If the lamas are disposed to continue their course, they follow the Indian in good order, at a regular pace, and very fast, for their legs are extremely long; but when they are in ill-humor, they do not even turn their heads toward the speaker, but remain motionless, standing or lying down, and gazing on heaven with looks so tender, so melancholy, that we might imagine these singular animals had the consciousness of another life, of a happier existence. The straight neck, and its gentle majesty of bearing, the long down of their always clean and glossy skin, their supple and timed motions, all give them an air, at once timid and sensitive. It must be so in fact, for the lama is the only creature employed by man, that he dares not strike. If it happens (which is very seldom), that an Indian wishes to obtain, either by force or threats, what the lama will not willingly perform, the instant the animal finds himself affronted by words or gesture, he raises his head with dignity, or without attempting to escape ill-treatment by flight, he lies down, turning his looks toward Heaven, large tears flow freely from his beautiful eyes, and in half or three quarters of an hour, he expires. Happy creatures, who appear to have accepted life on condition of its being happy.

TRAVELS IN THE HOLY LAND.—No. 4.

BY HARRIET MARTINEAU.

WE made an excursion from Jerusalem, to the Jordan and the Dead sea; going by way of Bethany and Jericho, and returning by the convent of St. Saba. There is at this day, so much danger of falling among thieves, in going down from Jerusalem to Jericho, that travellers join parties when they can, and unite their guards into a corps of armed men. Our own party of four, joined the ten with whom we had travelled in the desert: and four strangers—European gentlemen—requested permission to ride with us. Thus we were eighteen: and the dragomen, cooks, horsekeepers, and mule-drivers, who took charge of our tents and baggage, and ten armed guards, swelled our number to that of a caravan which no robbers were likely to attack. Indeed we scarcely saw anybody the whole way. The dangerous part of the road appeared deserted, and the plain of Jericho, once studded with towns, and filled with fertility, lay before us almost as lifeless as the basin of the Dead sea.

We left Jerusalem by St. Stephen's gate,—my three friends, myself, and our servants and baggage, and met the rest of the travelling party at the bridge, in the valley of Jehoshaphat, at 9 A. M. We proceeded by the camel road to Bethany, which winds up the side of Olivet, and crosses its ridge to the east. As soon as we had passed the ridge, Bethany came in view, lying on the eastern slope of the mount of Olives, and, as we all know, "fifteen furlongs" distance from Jerusalem. It is now a village inhabited by about twenty families; a very poor place; but looking less squalid than might be expected, from its houses being built, as everywhere in that country, of stone—square, substantial, and large, compared with cottages in England. Its position on the side of the hill is very fine, seen from below.

Ere descending the hill, however, we alighted from our horses to visit an old tomb, which is called the tomb of Lazarus. No enlightened traveller believes this to be really the place where Lazarus was buried: but to see any ancient tomb on that spot, was an opportunity not to be missed; and we gladly went down the dark rock-hewn steps, to the little chamber, where some corpse had once been laid. I have often wished that the old painters had enjoyed such opportunities; and then we should have had representations of Lazarus coming forth from chambers in the rock, and not rising from such a grave as is dug in European churchyards. The limestone rocks of Judea, are full of holes and cav-

erns; and we know from the Scriptures how abundantly these were used by the old inhabitants, as dwellings for themselves and their cattle, as a shelter to the wayfarer, a refuge to the fugitive, a hiding-place for robbers, and a place of deposit for the dead. Where a cavern was found with holes or recesses in its sides, a little labor, would make it an extensive place of burial. By squaring the entrance, and giving some regularity to the arch of the roof, a handsome vestibule was obtained; and then the recesses were hewn into form for the reception of bodies. Sometimes these recesses had pits; sometimes niches in their walls, so that each recess would contain several bodies: and sometimes they were small, so as to contain only one each. Sometimes the vestibule opened out into passages, which had recesses on each hand; so that a large company of the dead might lie hidden in the heart of the mountain. The whole was secured from wild beasts and other intrusion, by a stone door fitted to the entrance, or a large block rolled up against it. Those who have seen these Eastern tombs can never again be puzzled, as I was in my childhood, when reading of "the chambers of the grave," and of the dead calling to one another in the house of death, and of the stone being rolled away from the mouth of the sepulchre. Many a child wonders, as I did, how the way was made clear for Lazarus to come forth, merely by the removal of a stone: but, once having stood looking in at the door of a sepulchre, how vivid becomes the picture of Jesus standing there, and calling to Lazarus with "a loud voice," to come forth! How one hears that voice echoing through the chambers of the tomb, and sees the dead man in his cerements appearing from the steps of the vault, or the shadow of the recess!

In the tomb which we explored at Bethany, the vaults went down a considerable way, into the rock. One flight of deep, narrow steps led us into a small vaulted chamber; and two or three or more steps, narrower still, into the lowest tomb, which had little more than room for one body. The monks, when taken as guides, show in the village, what they call the house of Martha and Mary, and that of Simon the Leper: but we did not inquire for these, having no wish to mix up anything fabulous, with our observations of a place so interesting as Bethany.

We looked back upon the village again and again, as we descended into the valley; and it was painful to lose sight of the place where Jesus was wont to go to solace himself with the friendship of Lazarus and his sisters, and rest from the conflicts which beset him in the great city over yonder ridge. But we are now on the road from Jerusalem to Jericho, and

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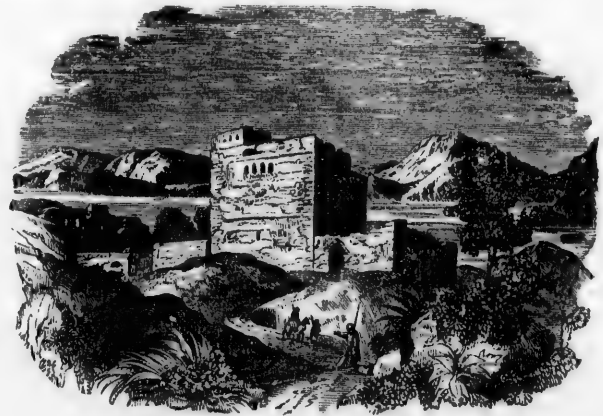
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 r ridge. But we are now
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Defile between Jerusalem and Jericho.



Ruins of Jericho.

about to pass among the fastnesses of the thieves, who seem to have infested this region in all times. After riding along the valley, sometimes on the one hill and sometimes on the other, for three or four miles, we left behind us the scanty tillage spread along the bottom of the valley, and began to ascend to the hollow way which is considered the most dangerous spot of all. Here Sir Frederick Henniker was stripped and left for dead, by robbers in 1820. His servants fled and hid themselves on the first alarm. When they returned, he was lying naked and bleeding in the sultry road. They put him on a horse, and carried him to Jericho, where he found succor. Perhaps he was thinking of the parable of the Samaritan when this accident befell him. I was thinking of it most of the way.

Another story was presently after full in my mind;—a beautiful catholic legend which was told me by a German friend in America, when I little dreamed of ever travelling over this spot. Our road now gradually ascended the high ridge from which we were soon to overlook the plain of Jericho. The track was so stony and difficult, as to make our progress very slow: and the white rocks under the mid-day sun gave out such heat and glare as made me enter more thoroughly into the story of Peter and the cherries, than my readers can perhaps do. And yet the many to whom I have told the legend in conversation have all felt its beauty. It is this.

Jesus and two or three of his disciples went down, one summer-day, from Jerusalem to Jericho. Peter—the ardent and eager Peter—was, as usual, by the Teacher's side. On

the road on Olivet lay a horseshoe, which the Teacher desired Peter to pick up: but which Peter let lie, as he did not think it worth the trouble of stooping for. The Teacher stooped for it, and exchanged it in the village for a measure of cherries. These cherries he carried (as eastern men now carry such things) in the bosom-folds of his dress.* When they had to ascend the ridge, and the road lay between heated rocks, and over rugged stones, and among glaring white dust, Peter became tormented with heat and thirst, and fell behind. Then the Teacher dropped a ripe cherry at every few steps; and Peter eagerly stooped for them. When all were done, Jesus turned to him, and said with a smile, "He who is above stooping to a small thing, will have to bend his back to many lesser things."

From the ridge we had a splendid view of the plain of the Jordan—apparently as flat as a table to the very foot of the Moab mountains, while the Dead sea lay, a blue and motionless expanse, to the right—(the south)—and barren mountains enclosed the whole. The nearer mountains were rocky, brown, and desolate, with here and there the remains of an aqueduct, or other ancient buildings marking the sites of settlements which have passed away. The distant mountains were clothed in the soft and lovely hues which can be seen only through a southern atmosphere. The plain was once as delicious a region as ever men lived in. Josephus calls it a "divine re-

* "Give and it shall be given unto you; good measure, pressed down, and shaken together, and running over, shall men give into your bosom."—*Luke vi. 38.*

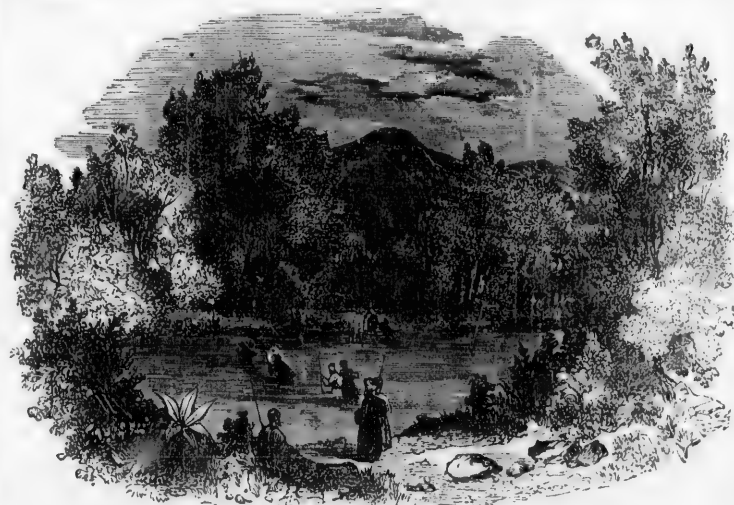
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The Plain of Jericho.



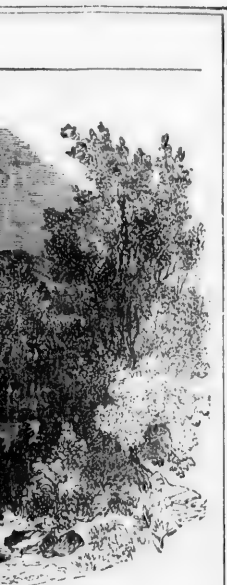
The River Jordan.

gion;" and tells of its miles of gardens and palm-groves: and here grew the balsam which was worth more than its weight in silver, and was a treasure for which the kings of the East made war. Jericho is called in the Scriptures the city of palm-trees; and Jericho was but one of a hundred towns which peopled the plain. Now, all near was barren; and equally bare was the distant tract at the foot of the mountains; but in the midst was a strip of verdure, broad, sinuous, and thickly wooded, where we knew that the Jordan flowed. The palms are gone; and the sycamores, and the honey which the wild bees made in the hollows of their stems. The balsam which Queen Cleopatra so coveted as to send messengers from Egypt for plants to grow at Heliopolis, has disappeared from the face of the earth; and, instead of these, and the fruits and sugar-canes which were renowned in far countries, we find now little but tall reeds, thorny acacias, and trees barren of blossom or fruit. The verdant strip, however, looks beautiful from afar, and shows that the fertility of the plain has not departed. There is enough for the support and luxury of man, were man but there to wish for and enjoy them.

We descended by a road, like an irregular staircase, the steepest hill I ever rode down. The gentlemen dismounted; but the heat was so excessive that I ventured to keep my seat. When I glanced up from the bottom, and saw

the last of the party beginning the descent, it looked so fearful that I was glad to turn away. We were now at the foot of the mountain called Quarantania, supposed by the monks to be the scene of the Temptation. A few pilgrims come from afar, every year, to spend forty days on this mountain, barely supporting life during the time by the herbs they find there. I need hardly say that there can be no good reason for fixing on this mountain as the place, and that the choice of it is probably owing to its commanding the plain of the Jordan and its cities—once no unfair specimens of the "kingdoms of the earth, and the glory of them." The caverns in the face of this mountain, once used as dwellings or tombs, are now the abodes of robbers. When some of our party showed a desire to reach the lower ones, the Arab sheikh who was responsible for the safety of our party, drew his sword across his throat, to show the danger, and barred the way.

It may be remembered, that the men of Jericho complained to Elisha the prophet, that the water of their spring was not good, either to drink, or to water their land for tillage (2 Kings: ii. 19), and that though their city was pleasant, they could not enjoy it for this reason: and that Elisha purified the spring, "so that the waters were healed unto this day." Beside this spring, now called Ain Sultan, we encamped in the afternoon, and found its waters truly delicious. Nothing



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could be prettier than this encampment, in a spot so forest-like as to contrast strongly with all we had seen for many weeks past. Our tent was close upon the brink of the clear rushing brook: but the heat was so excessive that we could not endure the tent, and had our dinner table placed under a tree, whose roots were washed by the stream. Broad lights glanced upon the rippling waters, and deep green shadows lay upon its pools. Our horses were feeding in the thicket beyond: and the Arabs sat in groups near the tents. Other parties of our company were dining or lying on the brink of the stream. Every encampment of travellers in these places is beautiful; but I never but once saw one so beautiful as this. After a walk to the remains of an aqueduct, and other traces (mere traces) of former habitation in the days when Jericho was a great city, I went, with one companion, to see the spring, which was but a short way from our tents. The water bubbled up from under some bushes, and spread itself clear and shallow, among some squared stones, which seemed to show that the source had once been enclosed. By this time it was dusk: the evening star hung above the nearest hill. All was silent about us, except the rustle and dip of the boughs which hung above the water. My companion and I found the temptation to bathe quite irresistible. Under the shadow of a large overhanging tree there was a pool deep enough for the purpose, and there we bathed, rejoicing with the people of Jericho in the sweetness of the water.

The eastern traveller feels a strong inclination to bathe in every sacred sea, river, and spring. How great the interest is, and how like that of a new baptism, those at home may not be able to imagine; and such may despise the superstition which leads hundreds of pilgrims every year to rush into the Jordan. But, among all the travellers who visit the Jordan, is there one, however far removed from superstition, who is willing to turn away without having bowed his head in its sacred waters?

There was no moon to-night: but the stars were glorious when I came out of our tent to take one more look before retiring to rest. Here and there the watch-fires cast yellow gleams on the trees and waters: but there were reaches of the brook, still and cool, where the stars glittered like fragments of moonlight. This day stands in my journal as one of the most delicious of our travels.

In the early morning, about five o'clock, I ascended a steep mound near our encampment, and saw a view as different from that of the preceding day, as a change of lights could make it. The sun had not risen; but there was a hint of its approach, in a gush of pale

light behind the Moab mountains. The strip of woodland in the middle of the plain looked black in contrast with the brightening yellow precipices of Quarantania on the west. Southward, the Dead sea stretched into the land, gray and clear. Below me, our tents and horses, and the moving figures of the Arabs, enlivened the shadowy banks of the stream.

We were off soon after six, and were to reach the banks of the Jordan in about two and a half hours. Our way lay through the same sort of forest-land as we had encamped in. It was very wild; and almost the only tokens of habitation that we met with, were about Ribhah—by some supposed to be the exact site of the ancient Jericho. This is now as miserable a village as any in Palestine; and its inhabitants are as low in character as in wealth. No stranger thinks of going near it who is not well armed. Yet there is need to resort to no means but honest and very moderate industry, to obtain a comfortable subsistence here—if only honesty were encouraged, and industry protected by a good social state. The fine fig-trees that are scattered around, and the abundant promise of the few crops that are sown, show that the soil and climate are not to blame. At this place there is a square tower, conspicuous afar above the trees, which some suppose to be the sole remnant of the great city: but it can hardly be ancient enough to have belonged to the old Jericho.

On a hillock in the midst of the brushwood, we saw a few birds of such size, that one of the party in a moment of forgetfulness, cried out "ostriches!" There are no ostriches in this country; but these cranes looked very like them, while on their feet. One by one they rose, stretching out their long legs behind them—certainly the largest birds I ever saw fly—or probably shall ever see.

Though we had been told, and had read, that the river could not be seen till the traveller reached its very banks, we could not help looking for it. Three broad terraces have to be traversed; and then it is sunk in a deep bed, where it rushes hidden among the woodland. Its depth of water varies much at different seasons; though less now than formerly. The Scriptures speak so much of the overflow of Jordan; and of the lion coming up at the swelling of Jordan, that it is supposed that formerly the river was subject to inundations which may have formed the three terraces abovementioned, and caused the extraordinary fertility of the plain in old times: and that the wild beasts which then harbored in the brakes, came up to terrify the dwellers in the fields. However this may have been it is not so now. The channel is no doubt deepened; and the river now in the fullest

season, only brims over its banks into the brakes, so as to stand among the canes, and never reaches the terraces.

Though we were all on the lookout, and though we reached the river at the spot which is cleared for the approach of the Easter pilgrims, we could not see the water till we could almost touch it. The first notice to me of where it was, was from some of the party dismounting on the Pilgrims' beach—When I came up—O! how beautiful it was!—how much more beautiful than all pictures and all descriptions had led me to expect! The only drawback was that the stream was turbid;—not only whitish, from a sulphurous admixture but muddy. But it swept nobly along, with a strong and rapid current, and many eddies, gushing through the thick woodland and flowing in among the tall reeds, now smiting the white rocks of the opposite shore, and now winding away out of sight, behind the poplars and acacias and tall reeds which crowd its banks. It is not a broad river; but it is full of majesty from its force and loveliness. The vigorous, up-springing character of the wood along its margin, struck me much; and we saw it now in its vivid Spring green.

The pilgrims rush into the sacred river in such numbers, and with so little precaution as to the strength of the current, that no year passes without some loss of life; and usually several perish. This year only one was drowned. Whatever superstition there might have been among our company, it was not of this wild sort; and we bathed in safety. The ladies went north; the gentlemen south. I made a way through the thicket with difficulty, till I found a little cove which the current did not enter, and over which hung a sycamore, whose lower branches were washed by the ripple, which the current sent in as it passed. On these branches the bather might stand or sit, without touching the mud, which lay soft and deep below. The limestone precipice and wooded promontory opposite, made the river particularly beautiful here; and sorry I was to leave it at last.

It is useless to attempt to make out where the baptism of Jesus took place, or where his disciples and John administered the rite. And on the spot one has no pressing wish to know. The whole of this river is so sacred and so sweet that it is enough to have saluted it in any part of its course.

The belt of woodland soon turned away eastward, and we found ourselves exposed to extreme heat, on a desolate plain crusted with salt and cracked with drought. There had been a closeness and maskiness in the air all the morning, which was very oppressive; and now it was at our usual slow pace almost intolerable. I put my horse to a fast canter,

and crossed the plain as quickly as possible, finding this pace a relief to my horse as well as myself. The drift on the beach of the sea looked dreary enough; ridges of broken canes and willow twigs, washed up, and lying among the salt and the little unwholesome swamps of the shore; but the water looked bright and clear, and so tempting, that our horses put their noses down repeatedly, always turning away in disgust. I tasted the water—about two drops—and I almost thought I should never get the taste out of my mouth again. And this is the water that poor Costigan's coffee was made of!

Costigan was a young Irishman, whose mind was possessed with the idea of exploring the Dead sea, and giving the world the benefit of his discoveries. It would have been a useful service; and he had zeal and devotedness enough for it. But he wanted either knowledge or prudence; and he lost his life in the adventure, without having left us any additional information whatever. He had a small boat carried overland by camels; and in this he set forth (in an open boat in the month of July!) with only one attendant, a Maltese servant. They reached the southern end of the lake—not without hardship and difficulty; but the fatal struggle was in getting back again. The wind did not favor them, and once blew such a squall that they had to lighten the boat, when the servant stupidly threw overboard the only cask of fresh water that they had. They were now compelled to row for their lives, to reach the Jordan before they perished with thirst; but the sun scorched them from a cloudless sky, and the air was like a furnace. When Costigan could row no longer, his servant made some coffee from the water of the lake, and then they lay down in the boat to die. But the man once more roused himself, and by many efforts brought the boat to the head of the lake. They lay helpless for a whole day on the burning shore, unable to do more than throw the salt water over each other from time to time. The next morning, the servant crawled away, in hopes of reaching Ribbah, which he did with extreme difficulty. He sent Costigan's horse down to the shore, with a supply of water. He was alive, and was carried to Jerusalem in the coolness of the night. He was taken care of in the Latin convent there; but he died in two days. Not a note relating to his enterprise was ever found; and during his illness he never spoke on the subject. Any knowledge that he might have gained, has perished with him; and no reliable information could be obtained from his servant. Costigan's grave is in the American burying-ground; and there I saw the stone which tells his melancholy story. He died in 1835.

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a young Irishman, whose was assed with the idea of exploration, and giving the world the discoveries. It would have been a great thing, and he had zeal and devotion for it. But he wanted either a guide; and he lost his life in the attempt, without having left us any consolation whatever. He had a great deal of land by camels; and north (in an open boat in the Red Sea) with only one attendant, a servant. They reached the south coast—not without hardship and the fatal struggle was in getting to the shore. The wind did not favor them, and such a squall that they had to turn back, when the servant stupidly took the only cask of fresh water. They were now compelled to live, to reach the Jordan before they were perished with thirst; but the sun was scorching from a cloudless sky, and the pace. When Costigan could no longer stand, his servant made some coffee of the lake, and then they lay down to die. But the man once again, and by many efforts, he reached the head of the lake. He was there for a whole day on the shore, unable to do more than throw stones over each other from time to time. The next morning, the servant crawled to the shore, reaching Ribbah, which he found to be a great difficulty. He sent Costigan to the shore, with a supply of water. Costigan was alive, and was carried to the coolness of the night. He died in the Latin convent there; two days. Not a note of relief was ever found; and he never spoke on the subject. That he might have gained, with him; and no reliable information was obtained from his servant. He is in the American burying-ground. I saw the stone which tells the story. He died in 1835.

There appears to be no satisfactory evidence, as to whether any fish are to be found in the Dead sea. Our guides said, that some small black-fish have been seen there; but others deny this. A dead fish has been found on the shore, near the spot where the Jordan enters the lake; but this might have been cast up by the overflow of the river. It is said, that small birds do not fly over this lake, on account of the deleterious nature of its atmosphere. About small birds I can not speak; but I saw two or three vultures winging their way down it obliquely. The curious lights which hung over the surface, struck me as showing an unusual state of the atmosphere—the purple dusky light resting on one part, and the line of silvery refraction in another. Though the sky was clear after the morning clouds had passed away, the sunshine appeared dim; and the heat was very oppressive. The gentlemen of the party who stayed behind to bathe declared, on rejoining us at lunch-time, that they had found the common report of the buoyancy of the water of this sea, not at all exaggerated, and that it was indeed an easy matter to float in it, and very difficult to sink. They also found their hair and skin powdered with salt when dry. But they could not admit the greasiness or stickiness which is said to adhere to the skin after bathing in the Dead sea. They were very positive about this; and they certainly did observe the fact very carefully. Yet I have seen since my return, a clergyman who bathed there, and who declared to me that his skin was so sticky for some days after, that he could not get rid of it, even from his hands. And the trustworthy Dr. Robinson, a late traveller there, says: "After coming out, I perceived nothing of the salt crust upon the body, of which so many speak. There was a slight pricking sensation, especially where the skin had been chafed; and a sort of greasy feeling, as of oil, upon the skin which lasted for several hours." The contrast of these testimonies, and the diversity which exists among the analyses of the waters which have been made by chemists, seem to show that the quality of the waters of the Dead sea varies. And it appears reasonable that it should; for it must make a great difference, whether fresh waters have been pouring into the basin of the lake, after the winter rains, or a great evaporation has been going on, under the summer's sun. In following the margin of the sea, we had to cross a creek, where my skirt was splashed. These splashes turned presently to thin crusts of salt; and the moisture and stickiness were as great a week afterward as at the moment.

We waded among salt marshes and brakes, in and out on the desolate shore of this sea—this sea which is not the less dead and dreary

for being as clear and blue as a fresh mountain tarn. As we ascended the ranges of hills which lay between us and the convent where we were to rest, the Jordan valley opened northward, and the Dead sea southward, till the extent traversed by the eye, was really vast. How beautiful must it have been once, when the Jordan valley, whose verdure was now shrunk into a black line amid the sands, was like an interminable garden; and when the "cities of the plain," stood bright and busy, where the Dead sea now lay blank and gray! As I took my last look back, from a great elevation, I thought that so mournful a landscape, for one having real beauty, I had never seen.

CULTIVATION OF THE MIND.

It has sometimes been thought that the cultivation of the mind would be an injury to those who obtain their livelihood by manual labor; that supposing every man, be his occupation what it may, were to have his mind highly cultivated, it would render him uneasy in his lot. Nothing can be wider from the truth. A single word will explain it—and that is, that as you raise men toward equality in intellect and education, you bring them nearer actual equality—and the distinctions of property and occupation will sink away to nothing. Was Washington any less respected when he became a practical farmer, than when at the head of the nation? No cultivated, intellectual man, can be degraded by his employment. It is the *mind* that makes the man, and that makes one man equal to another; and if we were to solve the problem how to make a whole community contented, we would raise them as near to an equality in education as possible. The two best-educated nations on the face of the earth, are, it is supposed, Denmark and the United States. The government of the one is despotism, and that of the other, its opposite, republicanism. And yet the inhabitants of these two countries are probably the best contented of any in the world.

An educated mind has so many resources within itself, that it has not to depend upon outward circumstances for happiness. A man with a cultivated intellect would feel neither disgrace nor uneasiness to have you find him at the anvil; nor would you, if you had a mind rightly educated, respect him any the less. "I well recollect," says a celebrated statesman, "calling in my college-days, to deliver a letter of introduction, to a gentleman whom I found cleaning out his barn-

yard, with his leather apron girded round him and his team his only helpers. I knew that he had led men in battle in other days, and that then he was the honored governor of one of the New England states; and I received a lesson from him by the call, which I trust I shall never forget. The interview made a deep impression on my heart." What must be the contentment of a community who needed so little of government that their chief magistrate might till his own little farm, and gain his bread by the sweat of his brow!

A very great number of our most valuable inventions and improvements are to be traced to intelligent men in the common walks of life. And there can be no doubt that in proportion to the intelligence of the mass of community will be the advancement of the world toward its final glory.

An intelligent man was a soap-maker. He noticed that after all the alkali had been exhausted, the ley would rapidly corrode his copper kettles. Unable to explain the phenomenon, he took some of it to an eminent chymist. On analyzing it, the chymist discovered a new substance, hitherto unknown, viz.: the metal called *iodine*. Further investigation traced this to the ashes, then to the sea-weed from which the ashes had been made—then to the ocean, to salt springs and to all marine substances. A physician in Germany reads the account, and recollects that he had heard that burned sponge had been known to cure the horrible, and till then incurable, disease called the *goitre*—which afflicts whole districts in the south of Europe. He conjectures that it is the iodine in the sponge which effects the cure, and he accordingly applies the iodine to the goitre, and it is found that it is almost an infallible cure. Thus a world of misery is prevented by the shrewdness of the soap-boiler.

A few years since, the scurvy was the terror of the seas. Whole crews were cut down, and more than once the case has been known, in which the bodies of the dead sewed up in sail-cloth, have laid rolling on the deck, day after day, because the crew were too much withered to raise them over the nettings and commit them to the deep. Admiral Hosier, who sailed for the West Indies with seven ships-of-the-line, during the last century, lost all his men twice over, during the single voyage, and himself died of a broken heart before he reached home. What a blessing did that man bestow, who informed the world that the simple acid of the lemon taken daily would banish this fearful disease! It is now almost unknown even in the most crowded ships.

The discovery of Franklin, a man at that time in common life, by which the lightnings

of Heaven are brought under the control of man, is an example in point. In France and Germany, where the lightnings are far more destructive than with us, this discovery is valued as it ought to be.

We might look at the lighthouse as it was, and as it now is, to see the immense improvements which have been made, and in consequence of which life is saved in multitudes of instances. We might point to the life-boat, which will now shoot out in the howling storm, and which will ride over any raging of the deep, and show that it is to the intelligence of every-day-laboring mechanics, that we owe this valuable machine for saving human life. We might mention the sections of Europe where the atmosphere is poisoned by malarious exhalations, and show what an amount of sickness and death has been prevented by *quinine*—a simple discovery, but one of immense value.

It was found that the steel dust which was created by grinding needles, and which is inexpressibly minute, filled the atmosphere, and the eyes and the lungs, and invariably caused consumption. Gauze veils of the finest texture were tried, but all to no purpose. No veil could prevent it from entering the eyes and the lungs. At last a workman notices a child playing with a magnet—drawing the needles and steel dust after it—as we have all done in childhood. The discovery is now made. A veil of fine magnetic wire is drawn over the face—and the air is *strained* pure—all the dust of the steel being attracted and held by the wire, and the labor of grinding needles is now hardly more dangerous than any other business.

These examples have been adduced (and they might be greatly extended)—and wonders, like those achieved by the cotton-gin and by vaccination, might be dwelt upon almost indefinitely—not because they are of course new, but because they show that mind and intelligence in the workshop are as valuable, and of as much use to the human family, as if they were employed in writing folios. One single fact brought into notice—one single phenomenon brought into view, and its explanation obtained, may be unmeasured in its results upon the world. Usefulness and respectability come from the union of a good heart and an intelligent mind, and are to be monopolized by no station or occupation.

While Scotland sends more of her sons to college, in proportion to her population, than any other country; two of the New England states, Massachusetts and Connecticut, are next to her in this respect, and all New England, and also New York, far before her, in giving their children the blessings of free schools. We feel that these schools, far in

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advance of anything of the kind on the face
of the earth, are the glory and the safety of
our institutions. We feel that we may safely
commit the dear interests of liberty to an ed-
ucated community: and that next to the re-
ligion of the book of God, there is no such
safeguard to these institutions. Every in-
crease of intelligence in our land, gives an
increase of confidence in the stability and
permanence of our institutions.

The objects to be obtained by cultivating
the mind, and for the sake of which we have
referred to various examples to encourage
others in the cultivation of their minds, are
these:—

1. To possess the power of fixing the mind
on any subject wished, and holding the atten-
tion upon it as long a time as is desired. This
is a very important thing, and he who has ac-
quired this power, has done a great work for
himself. It can not be acquired without many
and long efforts.

2. To fix in the mind the elementary
principles of all that pertains to life: such as,
the principles of science, of business, of poli-
tics, government, laws, and religion.

3. To give the mind precision of thought.

4. To give the power of using language,
and defining what is meant by such terms as
we commonly use when we speak or think.

5. To fill the mind with the materials of
thought, such as facts which we read, observe,
and hear.

6. To teach the mind where to go for in-
formation—that is, from what sources it may
draw.

7. To teach the mind how to take up a
subject, investigate it, and draw conclusions
on which it may rely.

8. To cultivate the judgment as to what
facts are worth preserving, and what are ap-
plicable in proving or illustrating a particular
subject.

9. To cultivate the memory so that the
materials which are gathered, may not be dis-
sipated and lost as fast as gathered.

It may be thought that we have laid out
the work of a life here, and so we have in-
tended to do; but if the objects to be accom-
plished are considered, it will be found that
no one of these can be omitted in cultivating
the mind in a proper manner. We can not,
of course, have all these objects specially be-
fore the mind whenever we exercise it; but
they are to be the points to which we should
bring the mind in all its wanderings, and in
a cultivated mind these several points will
unconsciously receive attention.

All this discipline of the mind only looks
to a high and noble object—which is to pre-
pare the mind to be the receptacle of light
and knowledge, the image of God, and the

unseen glories of an eternal state. In all our
contemplations of the mind, we look upon it
as an immortal existence, and that it is for
that state of immortality it is now to be pre-
pared. Education does not mean going to
school during our boyhood, or going to college
in youth, but it means the power to take our
mind and make it an instrument of conveying
knowledge and good impressions upon other
minds, as well as being itself made happy.
To cultivate the mind, then, does not mean
to read much or little, to converse and to ob-
serve, but to discipline it in all ways in our
power. We do not expect that every one
will discipline his mind so that he can observe
and think as well as Franklin—but what then?
Is this a reason why we should not do what
we can? Neither could Franklin reason like
Isaac Newton, and bring the universe at his
feet. What then? Was this a reason why
he should not do all he could?

BEAUTY OF A BENEVOLENT LIFE.

WITHOUT an enlarged consideration of the
nature of things, it might be supposed that
every man should devote himself to his own
welfare, and never feel obliged to render as-
sistance to others. Can not every one attend
to his own interests better than a second per-
son can attend to them? And does not evil
rather than good ensue, when each man neg-
lects his own individual concerns and devotes
himself to the affairs of his neighbor? But
the Author of our constitution has not proceed-
ed on the principle of concentrating the ac-
tivities of every individual upon himself. He
has chosen to diffuse them from each person
as a centre, through the area of a large circle.
He has not made the human ear so that it
shall be turned inward for hearkening to the
circulation of the blood, and to the sound of
every movement of a muscle or a nerve; but
he has made it so that it shall turn its atten-
tion outward, and shall take in the music that
floats along the air, and open itself to the
whispering zephyrs and the roar of the water-
falls. God has not made the human eye so
that it shall introvert its gaze and look behind
itself at the curious play of the nerves and
tendons, and the network of veins and arte-
ries; but he has so made the eye that it shall
look outward, and extend its range over long
drawn valleys and the winding course of rivers,
and along the sweep of the heavens. Neither
has he made the human heart so that it shall
find its true repose in clustering its affections
around itself; but the mother will cling to
her child, and the child will reach out its arms

to his mother; the parent diffuses cheerfulness through the family circle, and one family imparts of its pleasures to the neighborhood, and the neighborhood feel an interest in the town, and the town in the nation, and the nation in other countries of the world. Depraved as is the heart of man, it was yet made for benevolent action, and will never be in its due health and vigor unless it exercise itself for the welfare of the world. As the luminary of day was not created so that all its rays will converge to one point, but rather so that they will diverge throughout the whole system of planets; and as it gives light to the moon, but the moon instantly imparts the bright gift to the earth, and the earth reflects it for the use of man; so the human constitution was never designed for contracting its agencies within the sphere of its own good, but for diffusing its radiance throughout the whole family to which it belongs.

Benevolence is a fundamental law of our moral being; and the man who labors for his fellow-men secures thereby the gratification of his most commanding principles of action; but he who labors for himself alone, stirs up against his own peace some of the most operative elements of his nature. The Deity knew well that a disposition to labor for selfish ends is destructive of man's true interests; and that a disposition to labor for the common good, is the only sure way of securing good for self; therefore has he devolved on us many acts of beneficence which he might himself have performed as easily as omitted. He might speak a single word to the Hindoo widow as she ascends the funeral pile of her husband, and she would go down again in her right mind; but he chooses to set the spectacle before our own eyes, and to let us hear the shrieks of the self-immolating woman, so that our compassion may be moved and our energies enlisted in her service. He calls us to the banks of the Ganges, and bids us look upon the mother forcing from her breasts the child that weeps and struggles to remain with her, and throwing it into the stream where the eager alligators are gamboling for their prey. He could easily rebuke the frantic mother, and she would press her loved one closer to her bosom; but he chooses to touch our pity, and appeal to our benevolence, and to command us to send his gospel into all the world, that it may cast out the demons of superstition and may let the bond-slaves of heathenism go free. He bids us walk in our nations over the dolorous way travelled by the car of Juggernaut, and walked on either with the bones of crushed victims; He sets before our eyes hundreds and thousands of living men, hanging from transverse beams upon hooks that have perforated their mus-

cles, and swinging round and round in torture; He places all these barbarous scenes before our vision, so that the eye may affect the heart, and the heart may be roused to a holy purpose. For us to do, the work is left; for our good it is, that we address ourselves to the work in earnest; for the highest good of our whole character, the good of benevolence encouraged, of philanthropy developed, of a spiritual temper cherished and strengthened; a good purchased at great expense, even the miseries of our own fellow-men—they suffering so that we may be made more compassionate.

THE WASP FAMILY.

POETS and essayists are in the habit of likening the wasp to fops of another genus, and vice versa. This questionable sort of reputation these insects must ascribe to their splendid caparison, and to their apparently useless position in the world. The simile is more true in a more curious respect; for there are annual reunions of these glittering creatures, just as in the fashionable world—a fashionable season of a few months, and then all disperse again. The economy of the wasp family possesses considerable interest, and deserves far more attention than, in our hostile state of feelings toward the race, we are readily disposed to believe. It is only necessary that the real character of the tribe should be known, to remove at least the blot of laziness from it. That they are a set of bold, insolent, daring robbers, no one can deny; yet give them their due, and we shall admit that there is much in their habits deserving our admiration, and that even their audacious thefts have their redeeming points.

The general aspect of the *Vespidæ*, or wasps, is sufficiently familiar to obviate the necessity of description. Their black and gold-painted bodies, their powerful mandibles, formidable stings, and their surface destitute of hairs, are present to the eye at the very mention of the word. The society consists of males, females, and neuters, each having their appropriate functions; but the males, on the whole, leading the quietest and least arduous lives. The females are the hard-working foundresses of the colony, and the neuters are wasps of all-work—robbing, fighting, defending, nursing, and building, indifferently and by turns. Their history commences most conveniently for our purposes in the spring. At the conclusion of the preceding summer, the males, after pairing, all died, and there remained but a few females behind of all the busy ranks

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which crowded the vespiary. These are awa-
 kened by the return of spring. The solitary
 wasp finds herself immediately summoned to
 active duties. She has to construct the car-
 cass, and to excavate the earthwork, for her
 future people and city. Serious as is the task,
 she has to effect it all alone; not a single com-
 panion to cheer her hours of incessant toil, or
 to lighten her labor by a single load! Her
 energies are equal to the undertaking: she is
 to be seen buzzing about in the sunny morn-
 ings, looking out for a site. It is soon found:
 it is some dry, warm bank; and here she sets
 to her work. She perforates it, and forms a
 long circuitous tunnel, at the extremity of
 which she digs out a vault of considerable di-
 mensions. This task is performed in no care-
 less or slovenly manner; although every par-
 ticle of rubbish which the little excavator tears
 from the walls of her cavern must be carried
 in her jaws, she does not leave it at the en-
 trance, but voluntarily entails upon herself the
 vast additional labor of casting it away to some
 distance. Her design in so doing appears to
 be principally to avoid the risk of her cell be-
 ing discovered by a heap of rubbish at the foot
 of the bank. After the labor of excavation is
 ended, the walls are to be plastered, and to
 this fresh duty she at once addresses herself.
 Surely every person has seen the nest of the
 wasp, and wondered at its exquisite and deli-
 cate architecture of celled paper? Behold the
 architect! The nest is really made of paper:
 it was for some time a puzzle to our philoso-
 phers. Reaumur appears first to have de-
 tected the wasp in the very act of this manu-
 facture. He beheld her alight on a deal win-
 dow-frame; and watching, saw her tear a bun-
 dle of delicate, hair-like fibres, about an inch
 in length, from it, bruising the woody fibre
 with her mandibles until it became like a fine
 lint. This is the material from which the
 papyraceous plaster is to be prepared. Fly-
 ing away with it to her abode, it is there made
 into a proper consistence by the addition of her
 tenacious saliva; and when this part of the
 process is complete, it forms a fine, smooth,
 adhesive paste, precisely analogous to the
 product of our cumbrous and costly mechan-
 ism *papier maché*. Rolling it into a sort of
 pellet, she conveys it to the summit of the
 dome, plasters it on the wall, and spreads it
 out, by means of her legs and jaws, into a very
 thin lamina, which is veritable paper. Leaf
 after leaf must be added, until the whole cav-
 ity is thus papered or plastered over, and not
 with one coat alone; generally the insect lays
 down fifteen or sixteen, leaving spaces be-
 tween each layer, for the advantages of inward
 lightness and strength to her ceiling. Her la-
 bor does not end here. She has built the walls
 of the city: it remains for her to commence the

edifices, and supply the population. She builds
 a terrace of hexagonal cells, of marvellous ex-
 actness, and suspends it by paper pillars from
 the roof of her texture. These terraces emu-
 late in elegance and artistic skill, and far sur-
 pass in utility, the famous hanging gardens
 and terraces of the renowned city of old. A
 few hundred cells are thus constructed, and at
 length an interval of comparative repose awaits
 the laborer, while she proceeds to fulfil her
 more proper duties as a parent. Single-hand-
 ed, she has laid the foundation of the vesp-
 polis, and has marked out the general design
 of its future buildings; but she must have fur-
 ther assistance before the city will be complete.
 The walls, at present bare and desolate, the
 palace empty and still, are soon to resound
 with the hum of life, and with the busy labors
 of a new generation. In the cells the insect
 deposits her ova, gluing them to the walls by
 an adhesive substance; these are soon hatched,
 they become larvae, and are for some time en-
 tirely dependent upon their parent's exertions
 for their supply of food. She has to forage
 for this numerous and voracious progeny, and
 runs about from cell to cell with the utmost
 solicitude, while the grubs put forth their
 mouths, and are fed by her just as the "cal-
 low brood" of a bird is fed. Most pleasing is
 it to observe the anxious mother keeping watch
 over her offspring, and apparently many a
 needless time popping her head into their snug
 cots, as if to see how they do, and to give a
 mouthful of food now and then to some tender
 young larva not yet big enough to put its head
 out to be fed! A few weeks slip by—a great
 change has come over the vespiary: it is re-
 plete with life; hundreds of workers have been
 born in the interim, and are now laboring might
 and main, with the empress at their head, to
 extend the buildings, and enlarge the city.
 When complete, a vespiary has been calcu-
 lated to contain about fifteen or sixteen thou-
 sand cells, each of which is thrice a cradle;
 and therefore, in a single season, each nest
 will probably be the birthplace of full thirty
 thousand wasps!

Such is the birth and development of this
 insect colony—a lesson to states, and nations,
 and individuals, of the certain results of in-
 domitable perseverance. Let us trace out its
 government and destinies. The empress—
 the protoplast of this interesting microcosm,
 the foundress of this bustling republic—is an
 exaggerated type of the duties of its female
 members. These are produced in compara-
 tively small numbers; they perform the prop-
 er duties of wives and mothers; they stay at
 home, feed the children, and attend to the
 nurseries; they mostly perish before winter;
 but a few, more hardy than their fellows, en-
 dure its cold, and become the perpetuators of

the race in the ensuing spring. The males, according to the younger Huber, are far more industrious than the male bees, or drones, but are less active by far than the neuters, or working-wasps. They have the peaceful occupation of scavenging the streets: they sweep the floors of the terraces and avenues, and diligently carry off every particle of rubbish. They also undertake the funerals of any deceased companions, and speedily cast the dead bodies out of the vespiary. On the whole, they are useful members of the community; and they probably owe their permission to live to their diligence. The "workers" are the most interesting class: they are smaller in size than either male or female wasps, but are wonderfully energetic, and indefatigably laborious. Some are builders and repairers of the breach; they receive a commission to make excursions for building-materials; and returning home with their bundles of lint, set themselves to the repairs and extension of the city. Others are the commissariats: the issues of life at home are intimately connected with their expeditions. They roam over fields and meadows, frequently catching flies and weaker insects, and carrying the game home often with no inconsiderable difficulty. Dr. Darwin says he once beheld a curious act of a wasp: it had caught a large fly, and in rising with it into the air, the breeze caught its wings, and nearly wrenched it from the wasp's clutches. The insect immediately alighted, and deliberately sawed off the wings of its victim, when it was able to carry it in safety away. There was a something nobler than instinct in this action, nor is it by any means an isolated example of insect sagacity. Others seek our orchards, select the ripest, sweetest fruits, suck their juices, and convey home the luscious treasure, of which but a small portion is for themselves. These foragers will even enter and rob beehives. Those that tarry at home, in every instance share the spoil. Our grocery-stores and butchers' stalls are equally attractive to the forager-wasps. Surely it is some palliation of the robbery to remember the claims of hungry kins-folks, friends, and acquaintance, and little ones at home! There is no squabbling at their orderly meal-times; no fighting for the "lion's share;" each expectant insect receives its due portion, and is content therewith. "I have seen," writes the fascinating observer Reaumur, "a worker, after returning home with spoil, on entering the nest, quietly perch at the top, and protrude a clear drop of fluid from its mouth. Several wasps drank together from this crystal drop until it was all swallowed; then the worker would cause a second, and sometimes a third drop, to exude, the contents of which were distributed in peace to other

wasps." Here is a lesson for our young readers to observe and practise!

The mode of government is republican. There is no recognised head, as with the bees; yet an amount of even military discipline, and the utmost order, are to be found among the subjects. The good of the commonwealth seems to be the prevailing object of each insect. If the workers are building, each has its own spot, about an inch square, assigned to it, as the amount of work it is expected to execute. It was an interesting discovery of Mr. Knight, that wasps also have sentinels: these are placed at the entrance of the vespiary; they run gently in and out of it, and give immediate notice of the approach of danger. To their communications alone does the community give heed; and on their giving the alarm, will issue in angry hosts to avenge the injury, and defend their home to the death. Sometimes, however, but rarely, intestine combats take place; and there are terrific duels between the workers, or between a worker and a male. This is a bad affair for the latter, as he has no sting; his fate is generally to die.

One of the most striking facts in the natural history of the Vespidae is the occurrence of an annual massacre in October. Then the vespiary is indeed a scene of horrible atrocities and profuse carnage. The wasps, whose affection for their young is generally remarkably strong, seem then to be possessed with phrensied rage against them. They cease to feed their larvae: "they do worse," angrily writes Reaumur; "the mothers become implacable murderesses; they drag the helpless larvae out of their cells, slay them, and scatter them outside the nest, strewing the very earth with their dead carcasses. There is no compunction: the massacre is universal." A wise purpose is fulfilled by this apparent cruelty. The coming winter would rapidly destroy, by a far more miserable death, all that are killed on this occasion; and it is a stroke of mercy to terminate their sufferings by a blow. The early frosts destroy the murderers themselves. The scene is now, in truth, altered; "the populous city has become waste, and without inhabitant," saving some one or two females, which spend the winter in the depths of the vespiary. The complicated galleries, cells, and hanging terraces, and the entire framework of the nest, are for ever vacated when the female leaves them in the spring; and this exquisite specimen of insect architecture is abandoned to the destroying influences of time and accident. These interesting features of the history of the Vespidae are full of subject-matter for our meditation and admiration, indicating, so clearly as they do, that the "Hand that made them is divine;" yet all these marvellous sagacities, contrivances, and governing

lesson for our young readers!—

Government is republican. The head, as with the bees; even military discipline, and order to be found among the members of the commonwealth. The prevailing object of each insect is building, each has its cell, each square, assigned to it, and work it is expected to execute. The interesting discovery of Mr. Vespa also have sentinels: these guard the entrance of the vespiary; and out of it, and give notice of the approach of danger. To them alone does the command on their giving the alarm, and hosts to avenge the injury, come to the death. Sometimes rarely, intestine combats here are terrific duels between, or between a worker and a soldier; for the latter, as his fate is generally to die.

At striking facts in the natural history of the Vespidæ is the occurrence here in October. Then there is a scene of horrible atrocity. The wasps, whose young is generally remarkable then to be possessed with a rage against them. They cease to be "they do worse," angrily "the mothers become imbeciles; they drag the helpless cells, slay them, and scatter them, strewing the very earth with carcasses. There is no commiseration is universal." A wise man by this apparent cruelty, or would rapidly destroy, by whole death, all that are killed and it is a stroke of mercy to sufferings by a blow. They murder themselves.

In truth, altered; "the population waste, and without income one or two females, winter in the depths of the complicated galleries, cells, passages, and the entire frame, are for ever vacated when they in the spring; and this mode of insect architecture is destroying influences of time these interesting features of

Vespidæ are full of subject-matter for admiration, inquiry as they do, that the "Hand is divine;" yet all these marvellous contrivances, and governing

principles, present us with but dim and broken reflections of the far-seeing Wisdom that created all things, "and for whose pleasure they are and were created."

A few more particulars will make the history of this family a little more complete. The preceding sketch has dealt only with the common wasp, *Vespa vulgaris*. The mason-wasp is a solitary insect, and builds its nest in sand and brick—being able, by means of its strong mandibles, to break off pieces of brick with ease, and to burrow to a considerable depth in its substance. It has the peculiarity of storing up ten or twelve green larvae, as food for its own, and resorts to a curious contrivance to prevent them from moving out of its reach. The hornet, *Vespa crabro*, selects for its habitation commonly some decayed, hollow trunk, or the eaves of old buildings, where, constructing its nest, it forms a tortuous gallery of entrance. Our farmers sometimes make use of these nests to destroy domestic flies, hanging them up in their rooms, where they do not molest the family, but fall entirely upon the flies. Another species, the *Vespa Britannica*, forms a curious oval nest, sometimes to be seen hanging from the branches of trees. Others form elegant nests, like half-open flowers, with a platform of cells at the bottom. A foreign species constructs a beautiful nest, of a substance identical with the very finest cardboard, suspending it, like a watch from a guard-chain, by a ring at the extremity of the bough, out of the reach of monkeys. Sometimes these nests grow to an enormous size: the London Zoological Society has one six feet long. A South-American species of wasp imitates the bee, and is a collector of honey.

Bold as are the Vespidæ, great as is their fecundity, they are mercifully kept in check. The ichneumon is their ferocious foe; in the West-Indian islands they are the victims of a parasitic plant, which vegetates in their interior; man leagues his forces against them; and nature itself, in a deluging season or severe winter, destroys thousands, and prevents the plague becoming greater than we are able to bear.

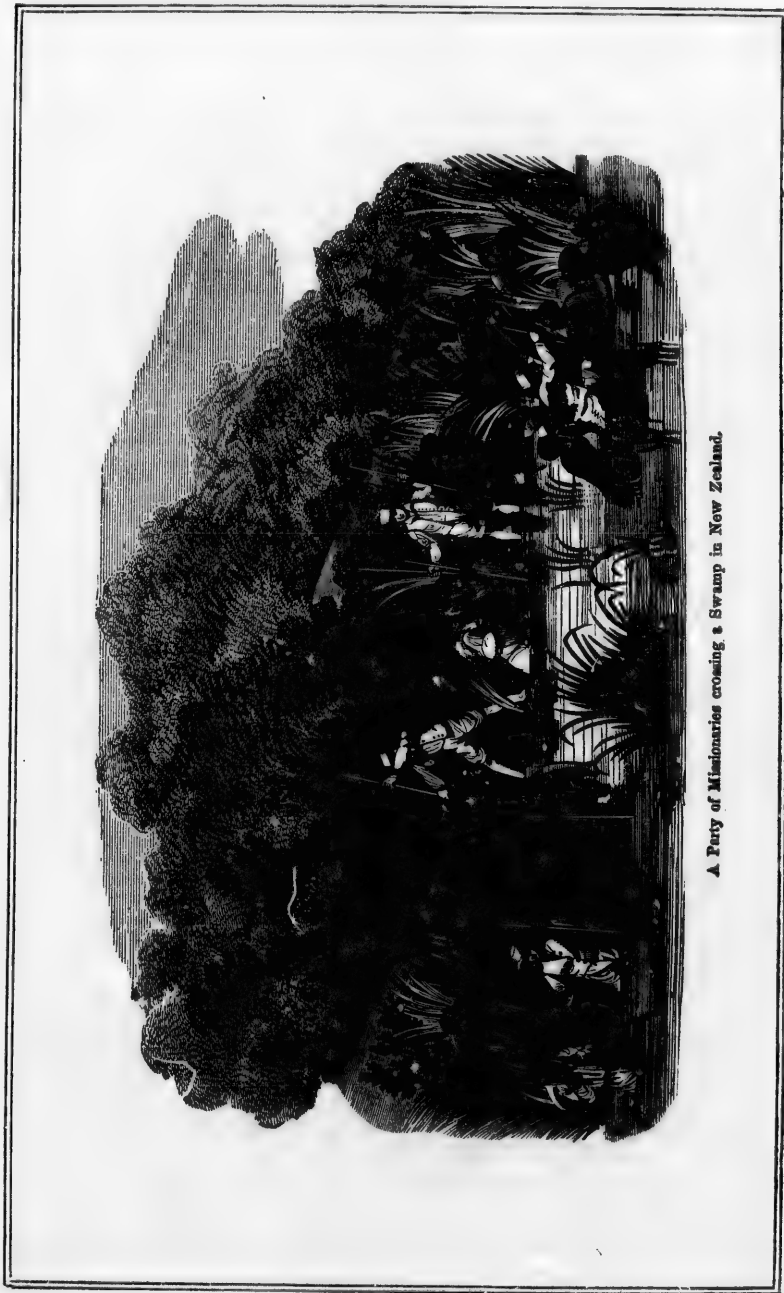
REASON.—It is the pilot of human life, and steers it steadily through wild and tempestuous seas, amid the rocks and shelves of fortune and folly, ignorance and error, and the thousand snares of the world. It is this alone that enables man to despise imaginary evils, and vanquish real ones. It arms the mind with true and lasting magnanimity, furnishes it with solid comforts, and teaches it to extract life and health, virtue and wisdom, out of the madness and mutability of men and fortune; like antidotes and cordials, out of things poisonous and baneful in their nature.

NEW ZEALAND.

THE two islands in the South-Pacific ocean, constituting what is known as New Zealand, were first discovered by Tasman. In the year 1642, he traversed the eastern coast from latitude thirty-four to forty-three degrees, and entered the strait, called Cook's strait. It was supposed, from the period of its first discovery to the time of the enterprising captain Cook, that the strait entered by Tasman separated an island from some vast southern continent; but the British navigator, who sailed round both islands in the years 1769 and 1770, completely removed this error. The two islands that go by the name of New Zealand are situated between thirty-four degrees twenty-two minutes and forty-seven degrees twenty-five minutes south latitude, and between one hundred and sixty-six and one hundred and eighty degrees east longitude. The northernmost of these islands is called by the natives Ekeino-mauwe, and the southernmost Tava, or Tovy Poenammoo. Upon referring to the map of this country, it will be seen that Ekeino-mauwe, or the northern island, running from the North cape, which is in latitude thirty-four degrees twenty minutes south, to Cape Paliser, in forty-one degrees thirty-six minutes south, contains four hundred and thirty-six miles in length; and taking the medium breadth, which varies from five miles at Sandy bay to one hundred and eighty at the East cape, at about sixty miles, this extent will include twenty-six thousand one hundred and sixty square miles; while Tava Poenammoo, the southern island, extending from forty-one degrees thirty minutes to forty-seven degrees twenty-five minutes south, stretches three hundred and sixty miles in length, and estimating its medium breadth at one hundred miles, contains not less than thirty-six thousand square miles.

Several missionary stations have been established here, for the double purpose of civilizing the natives, and instructing them in the truths of the Christian religion; and the missionaries continue struggling against the serious obstacles opposed to their progress, from the ferocious habits and superstitions of the natives. It was in the year 1814 that the first missionary settlers were established among the New-Zealanders, on the bay of Islands, by the Rev. Samuel Marsden.

Several New-Zealanders, who were brought to New Holland, and had there an opportunity of witnessing the arts and improvements of civilized life, have been of great service to the missions. The features of these islanders are better known to us than those of any others in that distant region, in consequence of the practice which exists of partially embalming their dead; and the head of a New-Zealand chief



A Party of Missionaries crossing a Swamp in New Zealand.

A Party of Missionaries crossing a Swamp in New Zealand.



is as frequently seen in our museums as any common specimen of stuffed animals.

Our engraving represents a party of devoted missionaries, accompanied by natives, passing through a swamp—an occurrence not unfrequent in travelling in New Zealand. The scene here represented took place in the journey of the missionaries to Matamata, one of the southern stations. The European to the left is intended for the Rev. Henry Williams: the one on the right, for Mr. Morgan, who, having slipped into a hole, is being helped out by the natives; the two in the centre, for the Rev. A. N. Brown and Mr. Fairburn. Difficulties like these, however, are far less serious than many others which the missionaries have to encounter in New Zealand. The baggage required by the missionaries in these journeys is carried by the natives on their backs, as shown in the engraving.

LECTURES ON ASTRONOMY.—No. 3.

BY PROFESSOR O. M. MITCHELL.

IN the examination of the structure of the universe, we are very apt to adopt the idea that it is impossible that any other system, than the system which we now know, does or could exist. We go even farther, and conceive the idea, that the great laws which now govern, are the only laws that could govern—that the law of motion, for example, is a necessary law of matter, and that the law of gravitation is a principle inherent in matter, which can not be severed from it. These are views which are too generally entertained; and, in the outset of what I am about to say, I beg to be understood as to my own conceptions, with regard to these important points.

I believe that "In the beginning, God created the heavens and the earth;" that he selected the laws by which he would govern the universe, and that these laws are the perpetual and unchangeable expression of his almighty will. But, do you ask the question: Could this system of ours, upon which we look with so deep an interest, have been differently arranged, and yet have accomplished the grand object which it seems designed to accomplish? That depends entirely upon what we conceive to have been the grand object. I contend it could not have been differently arranged with the objects in view, which we have reason to believe were had at the time of its contemplated organization. But do we, on the way through our examination, conceive fully and entirely—or even approximately—the grand object of this scheme

by which we are surrounded? I know it is difficult to touch this subject: it is hard to make myself understood: but a very few moments of explanation, I trust, will be sufficient—and then I will proceed to the application of the laws of gravitation.

In the first place, the great design in constituting the system by which we are surrounded, and with which we are associated, was to give to it perpetuity, so that it may not have the elements of its own dissolution, and decay within itself.

Let us stop here for a moment, and see whether this object could have been attained in any other way. I believe that it could have been attained in a much simpler way than it now is. Do not misunderstand me, for I use the expression with all reverence. If the law of gravitation had been a little different; if instead of every particle of matter attracting every other particle in the universe, this law had been announced thus: The sun shall attract the planets, but they shall not influence each other—the planets shall attract their satellites, but these revolving satellites, shall have no attractive influence upon each other—the sun shall draw the comets from the depths of space, and shall bring them to itself, and throw them off again, without their being influenced in any degree by approximation to the planets among which they move—then we should have had a stable system—one that would have endured throughout the ceaseless ages of eternity itself. And how simple this system would have been in comparison to the one which now exists. In the one by which we are surrounded, we find perturbation upon perturbation, disturbance upon disturbance, causing reaction throughout the whole, till every movement becomes so complicated and involved that it seems almost impossible to understand or follow their devious operations.

On the contrary, had the other system been adopted, so soon as we should have attained to the true position occupied by one of these beautiful orbs in its revolution above us—its uniform movement being fully understood—from century to century, from age to age, as far as the imagination can stretch in point of time, no change, not a solitary deviation, ever would have been made from the route which it first pursued.

But there was a higher object to be attained in the structure of the universe, than mere stability. We have shown how that might have been done. But this complicated system was given for our instruction, as a grand problem which would lead us in our investigations onward and upward to Him who built the universe in wisdom and with power. And hence we find the complication by which we are surrounded—and in this complication we

find that which stimulates and excites the human intellect to its highest possible attainments.

With this explanation, allow me to refer, to the concluding part of my last lecture. I attempted to exhibit the process of reasoning by which Newton accomplished the demonstration of the law of Gravitation—to show how, by the examination of the movements of the moon in its orbit, and the amount of space through which it fell toward the earth, under the influence of some attractive force there located, he found that force varied according to a certain law, to wit: The inverse ratio of the Square of the Distance.

The next point made—after he had attained this first one—by which he became convinced that this law was true, was to extend his examinations onward to see whether, in all other instances, this might be applied with success, and if the movements of the other heavenly bodies could be accounted for, on this hypothesis. He therefore, commenced the examination of the great problem, of which this was to be merely a corollary. He propounded to himself this vast question: Suppose a body to exist in space, located in such a manner as in a sense to be isolated. Now, as this body is endowed with this power of attraction which shall follow in the inverse ratio of the square of the distance: What would be the nature of the curve, described by the body revolving about this centre, when under the influence of force varying as did the force of gravity?

As I have already related, Kepler had found that the planets described elliptical orbits, having one axis passing through the centre, longer than all the others, and another axis perpendicular to this, shorter than all the others. Inasmuch as they did thus revolve, Newton hoped and believed that when he should have arrived at the truth in the investigation of this problem, as to the curve described, that it would prove to be an ellipse, inasmuch as they were known to revolve in these curves. He takes the analysis which he had conjured up for his aid, brings all his intellectual power to bear upon the problem, and subjects it to an irresistible analytical reasoning, of which all the data, were perfectly within his grasp. The result comes out—in a kind of cabalistic algebraic characters which I can not explain at this time. But it is sufficient to say, that there was an additional meaning; and the query was, What was that meaning? Was it an expression exhibiting the curve of the ellipse? It was strange, even to Newton, what that expression was; it did not look familiar; it did not exhibit the proportions of this elliptical curve—and what could it be? With much labor he unravelled the mystery,

and to his astonishment he found that instead of being the equation of the ellipse, as it is called, it was the equation—the general expression—of no less than *four curves*: the circle, the ellipse, the parabola, and the hyperbola, were all in like manner involved; each and every one of these curves being the expression to which he arrived as the result of his examination. But what could be the meaning of all this? He looks out upon the system for an answer; and lo! a comet, coming in from the distance, sweeps round the sun in a curve, called the parabola; another describes the hyperbola; the planets revolve in ellipses, and their satellites describe circles.

Here you perceive was a very unlooked-for result, and it became evident that either one of these four curves might be described about a body revolving about a centre, under the influence of the law of gravity.

When this result was reached, the next inquiry was this: Is it true now that every particle of matter attracts every other particle, according to this law? The examination of this question presented many difficulties. How was it to be resolved? How could he tell whether the force of attraction in the earth for example, was located in the central point of the globe, or distributed throughout the whole mass, existing equally in every particle of that mass. He commences by examining the figure of the earth—applies the law upon the hypothesis, that every particle did attract every other particle—he finds the earth revolving upon an axis, and perceives what is produced by the operation of this law upon the earth. If, in the outset, the earth were created perfectly spherical, he finds, under the influence of the swift rotation upon the axis, it can not maintain that figure; its form must be changed, and another given it in process of time; and he even predicted before the measurement had been made, what it must be, and determined what should be the ratio of the polar and the equatorial diameters of the earth.

But if the figure of the sphere were changed from the action of these laws, might not the process go on, and the globe at length become so entirely changed, that the particles of matter at the equator should fly off, and thus the whole mass be disintegrated and diffused in space?

Let us look at this for a moment. You are all aware of the fact that the earth is depressed at the poles, and protuberant at the equator—that the mass of matter composing the body of our planet, is heaped up, as it were, at the equator, and at the radius of the earth at that point, is thirteen miles longer than at the poles. How was this figure obtained, and how comes

it that it is not destroyed? I will attempt an explanation.

By the rotation of every revolving body, there is a force created, called centrifugal force. This you see verified every day: not a carriage rolls along the streets, but you see particles of dust flying off the revolving wheels. The same force is produced in the mass of the earth itself. Now suppose we pass from the equator toward the poles. When we reach the poles we find there is no tendency to fly off from that point, in consequence of centrifugal force, because there is no velocity of rotation. But as we recede from the axis of rotation, and as the radius becomes greater, the centrifugal force is increased in consequence of the velocity of rotation being accelerated.

Now let us take the fluid particles upon the earth's surface. What will be the consequence if it remain stationary, or if it move upward toward the equator and downward toward the poles?—for the solution of this question will determine the figure of the earth, under certain limits of calculation. These particles, under the influence of the centrifugal force, have a tendency to fly off in a perpendicular direction, and the force of gravity has a tendency to draw them to the centre of the earth. Under the action of these two forces, we find the particle does not remain stationary, but is moving upward, along a central line upon the surface of the earth, toward the equator, and thus particle after particle is impelled upward. But how is it possible that this operation should ever cease? I will explain the reason.

When a body rests upon an inclined plane, the action of gravity tends to bring it down that plane, and it requires a certain amount of force to heave it upward against the action of gravity. Now, when the particle of matter, under the influence of the combined forces already described, is heaved up and locates itself at the equator, still other particles are heaved up, till the whole figure of the earth is swelled out; and the next particles to be thrown up, will ascend in some sense an inclined plane. Recollect there is here a heaping up of matter—a swelling out—and the great level of the earth is changed, and the time finally comes when the gravity due to the inclined plane, upon which the particle rests, is precisely balanced by the force which tends to throw it up; and, this equilibrium once obtained, any further change in the figure of the earth for ever ceases.

We now take up the telescope, and with an inquiring gaze, examine the other planets. They, too, are moving upon their axes: But with the same velocity with which the earth moves? No; they all have different veloci-

ties. Are their figures in like manner changing by this rotation? I answer: they are all changing; or, if not, they still possess a figure of equilibrium heretofore obtained. And we find, moreover, that there are certain narrow limits within which a figure of this character must be circumscribed—that if the velocity of rotation given to any body should exceed a certain amount, this equilibrium is destroyed, the figure is changed, and even its solid substance disintegrated and broken up. But in all the examinations we have been able to make, we find these narrow limits nicely resolved, and no one of these falling bodies has exceeded the limits of stability and perpetuity.

Having examined the effect of gravitation, I propose to trace out, for a short time, some of the effects produced by this extraordinary change of figure, if I may call it a change. (I do not know if it ever were different.) It is found that a globe will attract precisely as if the matter belonging to it were compacted at its centre; and were all the planets precise spheres, then the problem of the solar system would have been merely to ascertain what shall be the relative influence of one of these bodies upon the other, all being regarded as simple material points. But this is not the fact: they are spheroids, flattened at the poles; in consequence of which we find a train of results of a curious and complicated character.

When you look out upon the north star, you find that object apparently fixed and permanent—and if the idea of fixity has ever entered your minds, you can get no stronger conception of it than that which results from the fixity of this star. "As unchangeable as the north star," has grown into a proverb. But if you could revisit this earth twelve thousand years hence, and look for your favorite bright and beautiful star—lo! it has changed its position—it has wandered to a distant region of the heavens—it is no longer in that point to which the earth's axis is directed, or near it; but some other has taken its place. What can be the meaning of this? I answer it depends upon the figure of the earth, and upon the action of the sun and moon, upon the protuberant matter girdling the earth's equator. Now for the explanation of this curious phenomenon.

If it were possible for us to extend the equator of the earth, till it met the sphere of the heavens, then to describe around the heavens a circle of fire that we could discern, running all the way around among the fixed stars, we should have the curve called the *equinoctial* in the heavens. Now, if we could trace out the track of the sun among the fixed stars, we should find another circle, but one not coinciding with the one we have already located—

they would form a certain angle, crossing each other at opposite points. The first of these is the *equator*, the second the *ecliptic*; and their intersections at their opposite points are called the *equinoctial points*. These points have been and will be examined with the utmost scrutiny. The attention of the earliest astronomer was directed to their position in the heavens; and upon the day in which the sun, sweeping around in its orbit, crossed this other circle, called the *equinoctial*—on that day, it was found that the length of the day and the night was precisely equal. Upon no other day did this occur, except on the two occasions, when the sun was in the act of passing through one or the other of these points. It became, then a matter of the deepest interest to locate this point among the fixed stars. I shall not attempt to point out the manner in which it was accomplished. It was simply with the brazen circles they had made for that purpose, that they accomplished this most desirable object. In Egypt, great attention was given to this point, in consequence of the fact that they marked some great events, such as the overflowing of the Nile, by the heliacal rising of a certain bright star. In centuries after, by referring this star to the equinoctial points, the overflowing of the Nile came, but the star which always announced it, did not come down in the horizon.

What could be the meaning of this? Either one of two conclusions must follow. The star itself had moved, or the equinoctial point to which it was referred was moving; and it was found, by referring all the stars to this point, that it was actually moving in the heavens, going backward, as it were, to meet the sun; and in consequence of this movement, the sun reached the equinoctial point before it otherwise would. Thus the difference of time in the sun's arrival at the equinoctial point, exceeded their computations, obliging them to carry forward the equinoctial points: and hence the term—*Precession of the Equinoxes*.

You may ask what has this to do with the movement of the north star, or the pole of the earth. I will explain: The point called the north pole is that through which the earth's axis would pass if it were protracted so far as to meet the celestial sphere. This imaginary axis of the earth, is as fixed and permanent, as if it were a bar of iron driven literally through the earth, and extending out to the heavens in such a manner, that its extremities should rest in sockets, and upon it the earth should revolve. Now follow me: take hold of this iron axle and heave it up, so as to change its position. What is the effect? The equator is always perpendicular to this axle, and if we shift the latter in the slightest degree we will in like degree shift the plane

of the equator; and this first circle of light, which we have supposed across the heavens—the *equinoctial*—is ever changed as you change the earth's axis. And whatever change is exhibited in the position of the equinoctial, in like manner, will be exhibited in the movements of that point called the pole of the heavens. But, in the process of time, we find that the point which the circle of the sun describes through space, intersecting the ecliptic, revolves entirely around; and if that be the case, then must the earth, in like manner, be governed and guided by this movement and revolve entirely around the ecliptic. And such is the fact. No less than 25,860 years are necessary to accomplish this mighty revolution! But it is moving on; and, from the earliest period down to the present time, we find this motion has been subjected absolutely to the law of gravitation, and that all this complicated result is a consequence of the oblate figure of the earth. Had our globe been an exact sphere, no precession of the equinoxes would have been known—no change of position of the pole ever would have been marked; but from century to century, it would have held its place—permanent—unchangeable—fixed as the seal of fate.

But for the explanation of the causes of these changes: The sun and the moon exert a constant force of attraction upon the earth, according to their masses and their distance. Were the earth a perfect sphere, the effect of these forces would be equable and producing no perturbation in the earth's movements; but the prepondering matter heaped up at the earth's equator, and standing in a position which brings it at an oblique angle to the forces of the sun and the moon produces a disturbance of the rotation and a tendency to draw down the equatorial ring to a coincidence with the plane of the ecliptic. But this force is counterbalanced by the rotary motion of the earth, and while the equatorial ring endeavors to revolve about an axis in its plane, it is also forced toward a revolution around an axis perpendicular to that plane. The result is, it revolves around neither of these axes, but on one which divides the angle between the two; and by this revolution the pole of the earth is as it were vibrated, and describes a small circle in the heavens. This nutation or vibration of the earth has the effect of retarding it in its orbit, so that at the end of the year it has not completed its journey around the sun, and therefore, does not cross the ecliptic in exactly the same place it did before. The consequence is, the heavens and all the host of stars appear to us to be rolling slowly forward—that the equinox goes forward to meet the sun—and hence the term *precession of the equinoxes*. The fact is, the earth falls short of

at this first circle of light, proposed across the heavens is ever changed as you axis. And whatever in the position of the equinox, will be exhibited in that point called the pole out, in the process of time, in which the circle of the high space, intersecting the entire around; and if that must the earth, in like manner guided by this movement, entirely around the ecliptic. act. No less than 25,860 to accomplish this mighty is moving on; and, from down to the present time, has been subjected to absolute gravitation, and that all this is a consequence of the obliquity. Had our globe been precession of the equinox—known—no change of power would have been mark-—permanent—unchangeable of fate.

Explanation of the causes of the sun and the moon exert attraction upon the earth, masses and their distance. perfect sphere, the effect would be equable and production in the earth's movement—pondering matter heaped equator, and standing in a line at an oblique angle to the sun and the moon produces a rotation and a tendency to a circular ring to a coincidence with the ecliptic. But this force by the rotary motion of the equatorial ring endeavors to axis in its plane, it is also rotation around an axis perpendicular. The result is, it rather of these axes, but on the angle between the two; the pole of the earth is, and describes a small circle.

This nutation or vibration the effect of retarding it in the end of the year it has journey around the sun, and cross the ecliptic in exact it did before. The consequence and all the host of stars rolling slowly forward—comes forward to meet the sun from precession of the equinox, the earth falls short of

her full revolution fifty-two and one tenth seconds in a year; and as there are 3,600 seconds in a degree, and 360 degrees in the great circle of the ecliptic, it follows that 25,868 years must roll round, before the equinox will make a complete revolution of ecliptic, producing within that period the longest and shortest day in the year, on every day from the 1st of January to the 31st of December. This surprising effect is all produced by the comparatively insignificant superabundance of matter aggregated upon the earth's equator.

But let us look at another point. We find that the earth is not entirely solid, its surface is covered by a fluid, within certain limits—and the inquiry arises whether this fluid is stable!—whether there are fixed bounds beyond which the ocean can not pass, or whether it may not occur that under the influence of the combined action of the planets, tides may arise which shall sweep over and submerge the entire surface of the habitable globe? I answer again, there are here provisions which mark the wisdom of Him who built the heavens. If it were possible to take up our ocean and to empty it into the cavity of the planet Saturn, no stability would ensue—the ocean would overleap the bounds to which we would attempt to confine it, and rush from one quarter to the other, carrying destruction in its path; but, owing to the relations existing between the specific gravity of the earth and ocean, we find the stability here complete; and although the action is going on constantly—although the waves are caused to leap up in some sense, toward the moon and the sun, yet there is a limit beyond which they can not pass.

There are many who find it exceeding difficult to understand the nature of tides, and how it is that the moon and sun should produce them. The heaving up of the water on the side next to the sun and moon, is a matter easily comprehended; yet how they should produce a tide on the opposite side, is quite mysterious. But let us examine this question, and see whether an explanation can not be had. The cause of tides is the attraction of the moon upon the mass of water on the earth's surface, drawing it upward toward itself. If every particle were equidistant from the moon, then would the action be the same on every one, and there would be no change of figure; but the truth is, the earth's diameter is a very sensible quantity, compared to the moon's distance; the distance of the moon is but thirty times the diameter of the earth: hence the water on the side next to the moon is closer than that on the opposite side, and hence there is a stronger attraction exerted upon that side nearest the moon.

But to render the explanation more perfect,

let us go back to the position we took some time since, with regard to the fact that the moon was ever falling toward the earth. This I have attempted to explain, and I hope it was comprehended. You will understand also, that the earth is always falling toward the moon, under the action of precisely the same power. Now if we could see a mass of fluid in the act of falling toward a body, we would observe the attracting body operate more strongly upon the particles next to itself, and draw them away from the rest, leaving them behind in their race to the centre; hence we see why it is that the waves next to the moon should be protuberant. But how is it that those on the opposite side are swelled out? Because the earth being nearer the moon than the ocean on the opposite side, is drawn away toward the moon, and leaves the ocean behind; hence it is protuberant in both directions. But I do not intend to go into a full exposition of the tides; I must pass on to other matters. This has been a most difficult problem for the mathematician. The combined action of the moon and sun, and their coming in opposite directions, producing extraordinary changes—then the fact that these are not revolving in the same plane and not at all in the plane of the earth's equator, causes them to sink on one side, and bear up upon the other side. In all the computations of these varying influences, the results have nearly coincided with the actual facts.

I propose, in the next place, to examine effects produced upon the moon's orbit, by the disturbing action of the earth. And here I shall have occasion to reveal some extraordinary movements that belong to the whole system by which we are surrounded. There are certain elements, as they are called, which fix and determine the nature of the orbit of any heavenly body, in order to understand which it becomes necessary to explain what these elements are.

In the first place, the elliptic orbit is a certain figure determined by a longer diameter, called its *longer axis*, and a shorter called its *shorter axis*. When their lengths were given, the figure of the ellipse can be described. This is the first thing—to get the magnitude of the orbit—but when that is obtained, we do not yet know what location it takes with regard to other surrounding objects. In order to fix it in space, we must get the *direction* of this longer line called the longer axis. Now the sun is always located at the focus, and the distance of the sun to the extreme longer axis, is on one side the shortest, and on the other the longest possible distance. Having then, the position of that line and having the inclination to the fixed plane, we are enabled to locate the orbit in space. We have

yet to obtain the periodical time, and not only the precise position of the planet in some one known point in its orbit, but the particular date; after which we are enabled to follow its movements in all its wanderings.

When we have accomplished this, the question arises: Are there no subsequent changes? There are changes of a most curious and complicated kind, and which in the outset would seem to destroy absolutely the nature of the orbit, and lead to the ultimate destruction of the entire system. In the moon's orbit, we find that the point nearest to the earth, called the moon's perigee, is never fixed and permanent, but always varying its position, and finally performing an entire revolution. This is a point to which Newton directed his mind, attempting to account for the rapidity with which this line was revolving in the heavens upon the hypothesis of gravitation. He brought into account, as he supposed, every point that could bear upon the result, and when he reached it, he found the amount of change was not coincident with that actually exhibited in nature. Here the law of gravitation seemed at fault; and after many tedious efforts, this great man actually died without solving its mystery. It was taken up afterward by his successors, and in every instance it seemed that Newton's results were confirmed most absolutely. It was finally given up to Clairaut, who grappled it with all the power of analysis; but in spite of all he could do, he reached just the results attained by all his predecessors; and, for a moment, he declared it was impossible to account for this curious exhibition in the heavens. But strange as it may appear, an individual without education in astronomy, with simply a knowledge of mathematics, stepped forth, and ventured to defend the law of gravitation—and there was a long dispute between the two—one of them a metaphysical philosopher, and the other, one who had devoted his best energies to the cultivation of pure abstract science. Clairaut determined to prove himself right; reviewed his entire investigation, and finally in the examination of a mathematical series, entering into the result, which at each successive term had grown less and less, till it seemed that they were absolutely to disappear, and he believed they would disappear, and that the remaining ones might be neglected; he found, on pursuing the problem a little further, that the character of the terms began to change, and instead of diminishing, they began to increase, so that when he had added together all the terms and completed the result, he found the law of gravitation was confirmed in the most absolute manner—theory and observation coinciding precisely.

I would call your attention to another single

investigation, which has in like manner demonstrated, not only how far the human mind can carry its researches, but how absolutely applicable this one solitary law, is to all the changes and phenomena which are exhibited by these heavenly bodies. I have already stated, that we have records of eclipses extending back 2,500 years. Now, when we come to examine the velocity with which the moon was moving at that time, we find that it is not the same with which it is now moving; that it is actually in advance of the position it should occupy—on the hypothesis that its motion is uniform, and was accurately determined at that time—by an amount equal to nearly four times its diameter. It seemed impossible to account for this acceleration of motion. Every effort was made to reduce it to the law of gravitation; but it seemed to evade every attempt. Some were disposed to reject the early observations; others believed that there was a resisting medium which impeded its motion, diminishing its distance from the earth, and accelerating its motion around the earth, describing a spiral line, and that slowly and surely it would at length approach our globe, and bring destruction to the whole system.

In this dilemma, Laplace comes in to the rescue of physical astronomy. He took up this problem, and, with the aid of the accuracy he had obtained in his previous investigations, he finds himself able to master it, and not only to do this, but to tell the reason why it was, that this accelerated motion of the moon was going on. I will attempt his explanation.

It is found, on examination of the elements of the orbits of the planets, that this longer axis, which has been described, is invariable—it never changes—while the shorter axis is subject to fluctuation, according to the configurations of the heavenly bodies. It is found, that the earth's orbit is changing its figure. It is now elliptical; but this is slowly disappearing. It has been going on for centuries, and must continue for centuries to come, till finally, the shorter axis becomes equal to the longer, the eccentricity of the orbit disappears, and the earth revolves in a perfect circle around the sun. When this point shall have been reached, analysis demonstrates the truth that a change begins, and the figure then circular, slowly begins to come back again to its elliptical figure: and thus, in periods so great, that the human mind can not stretch sufficiently far, to comprehend them, we find these mighty oscillations sweeping backward and forward in the narrow limits within which Infinite Wisdom has confined them.

But what effect should this change have upon the motion of the moon? I will answer.

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 Should this change have
 any effect on the moon? I will answer.

The moon is revolving about the earth, and
 its motion is impressed upon it. Now, if no
 other object existed outside the moon's orbit,
 the earth would be able to draw the moon
 closer to itself, and impress upon it a central
 movement. But all the other heavenly bod-
 ies, are on the outside of the moon's orbit,
 drawing it away from the earth, taking it
 partly from under the influence of the earth,
 and exerting their influence upon it. Hence,
 if it were possible to remove the earth and
 the moon further from these disturbing influ-
 ences, then will the moon come entirely under
 the influence of the earth, and its motion will
 be increased. Now this is the exact case in
 nature; it is precisely what is going on, in
 consequence of the changes on the figure of
 the earth's orbit. Its orbit is becoming more
 nearly a circle, not bringing the moon so near
 the sun as it once did; hence it is able now
 more effectually to master its own satellite,
 and thus impress upon it a more circular orbit.

But is this to go on throughout eternity?
 I answer, no. For when an orbit shall have
 attained a circular form, and begins to recede
 back to an elliptic figure, then will these
 changes again take place in the motion of the
 moon, and that which was once acceleration
 becomes a retardation, and from the effect of the
 very same cause, the sun will begin to take
 hold of the moon, with greater and still great-
 er power. Now what the period of these
 changes may be—although possibly within
 the limits of calculation—we have not yet
 computed. One thing, however, we do know
 —they are not to be reckoned by hundreds or
 thousands—they must expand to millions of
 years before the exact conformation of the sys-
 tem can be brought about again.

Though I have presented you demonstration
 upon demonstration, you will pardon me if
 I occupy a little more than my allotted time,
 in giving some account of the telescopic ap-
 pearance of the moon's surface. Those, who
 for the first time, behold the moon's surface
 through a powerful instrument, will always
 be disappointed in its appearance. There are
 mighty mountains on its surface; there are
 deep bleak cavities, some perhaps fifteen,
 twenty, forty, and even sixty miles in diam-
 eter and sinking below the surface, seven and
 eight thousand feet. Out of these, mighty
 rocks arise two thousand feet above the level
 of the valley, casting their deep black shad-
 ows upon the plains below. All these things
 are very fine; and yet on looking at them
 through the telescope, for the first time, one
 is invariably disappointed. You can not see
 mountains as you see them in the highlands of
 New York: you can not see the gray rocks
 projecting so beautifully as you behold them
 on some earthly mountain height. Remem-

ber after your telescope has carried you out
 as far as it can reach, there is yet a whole
 hundred miles to be overcome. So in spite
 of all you can do, and with all the aid you
 can bring, you are a hundred miles from the
 object.

But do we know nothing of the moon?
 Are we so far off, that we can tell nothing of
 the characteristics of its surface? I answer:
 We know that towering mountains lift their
 lofty heads, deep caverns yawn, and there are
 vast circular elevations, resembling the usual
 productions of volcanic action. And how do
 we determine these things? By the lights
 and shadows which show themselves to the
 eye, we measure the height of these mount-
 ains, by remarking the relative position of the
 sun and the earth. We mark the extremities
 of their long deep shadows, and find that as
 the sun slowly rises, the shadows by degrees
 recede toward the base of the mountains;
 and, when noonday arrives, they entirely dis-
 appear. Then as the sun begins to decline
 on the other side, the same dark shadows are
 cast in the opposite directions. We watch
 these movements till we ascertain with per-
 fect certainty the character of the object
 which casts the shadow, and we measure its
 height. These are reliable facts.

But the question next comes: How is it
 possible to measure the depths of those deep
 cavities? It appears as if immense lakes
 had once filled them, and by some extraordi-
 nary means, the water had been evaporated,
 leaving the interior dry, hard, and sterile. We
 find these depths in like manner as we ascer-
 tain the height of mountains. When the
 sun is first rising, it casts its light into these
 cavities of the moon; we see shadows cast by
 the sunward sides, and the limits of the cavi-
 ties are defined with a degree of accuracy sur-
 passing anything upon the surface of the
 earth. For the shadows are not here so black
 as upon yonder orb. They are mitigated and
 dispersed through the influence of our atmo-
 sphere. But on the moon there is no atmo-
 sphere, at least not such a one as will compare
 at all with ours. The moon's atmosphere, if
 indeed it have one, can be no denser than the
 extremely rarified air left in the most perfect
 vacuum yet produced in an exhausted re-
 ceiver. It can not sustain animal life—it can
 not support clouds, nor can it sustain combus-
 tion. And for the reason that the moon has
 no atmosphere, there is no gradual fading
 away of the light as the sun sinks deeper be-
 low the horizon—no soft, mild, and lovely
 twilight, such as sheds a holy serenity over
 our favored globe—but instantaneous and ap-
 palling darkness follows the setting of the sun,
 drear as the night of death; and broken—not
 by the "rosy-fingered morn," slowly waxing

from faint streaks of light, to the fullness of the day-spring—but startled from the very depth of blackness by the lightning-flash of the sun's meridian glory.

SIERRA LEONE.

SIERRA LEONE is a considerable country of Western Africa, on the Atlantic, distinguished for the colony formed there by the British nation, rather from motives of philanthropy than from those of commercial advantage. It is traversed by a considerable river, called the Mitomba or Sierra Leone. Its name is derived from a ridge of mountains, which rises near the southern bank of the river. This country equals, in fertility and populousness, any other in this part of Africa. It consists generally of one vast, almost impenetrable forest, only particular spots of which have been cleared and cultivated. Rice is raised wherever the ground is sufficiently watered for its production, and forms the constant food of the rich; but the poor content themselves with millet, yams, and plantains. There is a great abundance of the most delicate fruits. Elephants' teeth and civet are brought to the coast. The woods and mountains are infested with wild animals, particularly lions, from the multitude of which the country appears to have derived its name. There are swarms of insects, flies, mosquitoes, and particularly ants, the white species of which commit extraordinary devastation. The serpent species are also very numerous, and the rivers, besides yielding an ample supply of fish for food, contain large alligators, and the manata or sea-cow.

The natives of this country are not of so deep black a complexion as those of Cape Verd, nor have they the flat nose of the negro race to such a degree, but the character of the different tribes varies very considerably. The Portuguese were the first who discovered and formed settlements on the river Sierra Leone. Toward the close of the eighteenth century the British began to turn their views toward Sierra Leone, with a view to colonization, for the more effectual abolition of the slave-trade, by raising up an African colony, whither the slaves might be sent as freemen. Lord Mansfield having decided, in 1772, that a slave who sets foot in Britain becomes free, a number of blacks in this country left their masters, and were wandering about in a desolate condition. Granville Sharp formed the plan of transporting them to Africa; and, the aid of the government having been obtained, they were landed, in 1787, upon a

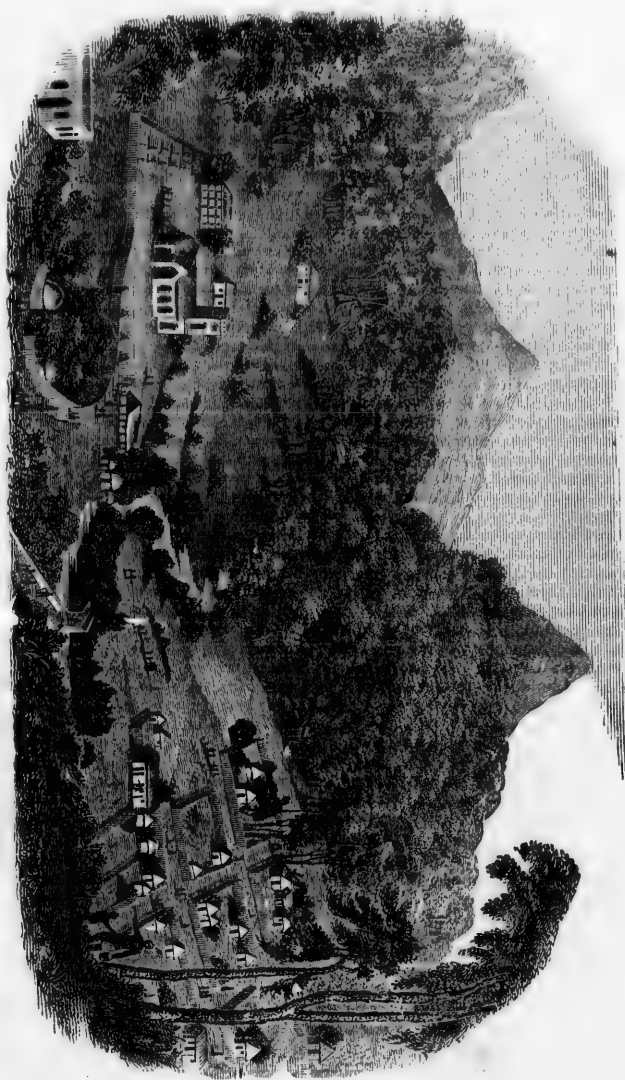
district purchased from the king of Sierra Leone. These negroes and the white females sent with them were mostly of indifferent characters, and a severe mortality ensued among them. In 1792, about 1,200 negroes, who had left their masters in the United States, during the revolutionary war, were also landed at Sierra Leone; and several years later the colony was increased by 550 Maroons from Nova Scotia. Little progress, however, had been made in the objects for which the colony was formed, and, in 1807, it was surrendered into the hands of the crown. At the period, Great Britain received permission from several powers to treat as pirates such of their subjects as should be found engaged in the slave-trade north of the line; and the liberated negroes seized by her cruisers were placed at Sierra Leone. For the first six months they receive a daily allowance from the government, after which lands are assigned them, and they are left to support themselves. The number thus liberated has been about 20,000; and although their wild and improvident habits have thrown many difficulties in the way of the benevolent exertions of the British authorities, recent accounts give decided proofs of great improvements in the spirit and condition of the colonists. Freetown, the principal place of the colony, has an excellent harbor on the river Sierra Leone, about six miles from the sea, and upward of 6,000 inhabitants. Regent's town, six miles south of Freetown, founded in 1816, has a population of 1,300; and in the vicinity are several villages, with a more distant stations of Waterloo, Wellington, and Hastings. Bathurst, on the Gambia, is a settlement also connected with this colony.

Our cut represents part of Regent's town in the colony of Sierra Leone. It is inhabited by negroes of many different nations in Africa, whom piratical dealers were carrying into slavery. The ships in which they had been crowded together were taken by the English cruisers, and the negroes set at liberty. Here, and in other towns in the colony, these injured negroes are placed in safety.

On the right of the view, a part of the town is seen: it extends, however, a considerable way further than is shown in our engraving. It is laid out with regularity, possesses several streets, and is inhabited by nearly 2,000 negroes old and young. A stone-bridge, built by the negroes, leads from the town to the side of the brook where the principal buildings are. These consist chiefly of the church, the mission or parsonage house, and a house for the governor. These and other buildings are all of stone. This place is now a beautifully-cultivated and well-governed spot; and yet, only a few years since,

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Part of Regent's Town, a Settlement of Liberated Negroes in the Colony of Sierra Leone.



the whole was a wild desert. Another view of the town is presented on the opposite page.

The climate of Sierra Leone forms so peculiar a feature of its geographical character, that we gladly avail ourselves of Major Rickett's account, prefixed to his journal of the Ashantee war:—

"On landing at Freetown, a stranger is not a little surprised to behold a place so far superior to what he had been induced to expect; and if he should arrive in the hermitan season when resident Europeans are generally in better health than at other periods of the year, from its salubrious effects, he will be struck with an agreeable smell, similar to that of new hay, and will wonder how it was possible for a place could be so unhealthy as represented; but on the approach of the rainy season, his wonder begins to cease.

"The hermitan is a very dry easterly wind, which, in a few days, dries up all vegetation, except trees; it sets in about December, and continues at intervals for several days together: such is the nature of the hermitan, that the flooring of the houses, window-shutters, and other wood work, shrink and separate more than an inch asunder; the glass is broken, and the furniture is warped, but at the approach of the rains, the open seams gradually close again.

"After the absence of rain for many months, the parched surface of the earth, all its vegetation, except trees, having been dried up by the hermitan, and then scorched by the intense heat of a tropical sun, is suddenly covered with verdure. The day after the first shower, the force of vegetation is so great, that the face of nature is completely changed, and it may literally be said that the grass and weeds may be seen to grow; yet, however strange it may appear, although these, as well as the indigo plant, grow spontaneously everywhere, new land will not satisfactorily produce the usual articles of consumption for three successive years, and some land will not even yield the second year. The dry season is preceded by dry tornadoes, which, toward the latter end of May, are accompanied by rain; they last generally about an hour, sometimes not so long. They very much resemble the hurricanes in the West Indies, but are not so furious; they vary from southeast to northeast. A dark cloud in the eastern horizon foretells the approach of a tornado; it advances, accompanied by tremendous thunder and vivid flashes of lightning, which at first are distant and faint, until the whole heavens gradually become obscured by one black cloud. It frequently happens that, from the quarter opposite to that where the cloud first appears, there previously arises a breeze, which dies away as the tornado

gathers; the atmosphere then becomes very sultry, and the tornado advances, with a great rush of wind, bursts, sweeping before it (if no rain has previously fallen) immense clouds of dust. The wet tornadoes are succeeded by a beautiful serene sky, and the air is greatly refreshed; the frame becomes invigorated, and the mind more cheerful. As the rainy season advances, the tornadoes gradually cease, and are succeeded by almost constant heavy rain; at the termination of the rain, the tornadoes again make their appearance, becoming weaker as the dry season approaches, until they cease altogether.

"At intervals during the day in the rainy season, the action of an intensely hot sun on the earth, covered with a luxuriant vegetation, and saturated with moisture, produces a disagreeable sickening smell, which is probably one of the causes of the fever that prevails at this period of the year, as persons recently arrived are generally taken ill in July or August; some, however, have been known to reside in the colony about two years without having been affected by it. If they remain beyond this time, they are certain not to escape it much longer; and when at length they take the fever, it generally proves fatal to them. It is considered a more favorable symptom for a stranger to be seized with the fever soon after his arrival, the havoc which this dreadful disease has made among the Europeans who have gone out, or have been sent to the colony, is well known. On the first arrival of European troops, in 1825, they died in greater numbers than at any subsequent period; the cause was attributed much to the incomplete state of the barracks, which had been hastily erected, the materials arriving from England at the same time with the troops, the barracks could not, consequently, be covered in before the rains. From the want of accommodation on shore, most of the troops were kept on board the transports for some months. After the completion of the barracks, and the walls had become dry, the troops enjoyed better health, but they drank freely, and it was very difficult to keep them sober. This no doubt tended much to bring on sickness among them; the officers died, however, in proportion."

THE AMERICAN CONTINENT.

HAD not Columbus discovered America in 1492, it would not have much longer remained unknown to Europe, as the continent was found by Cabot, a Portuguese navigator, about 1500. He was on a voyage to the East

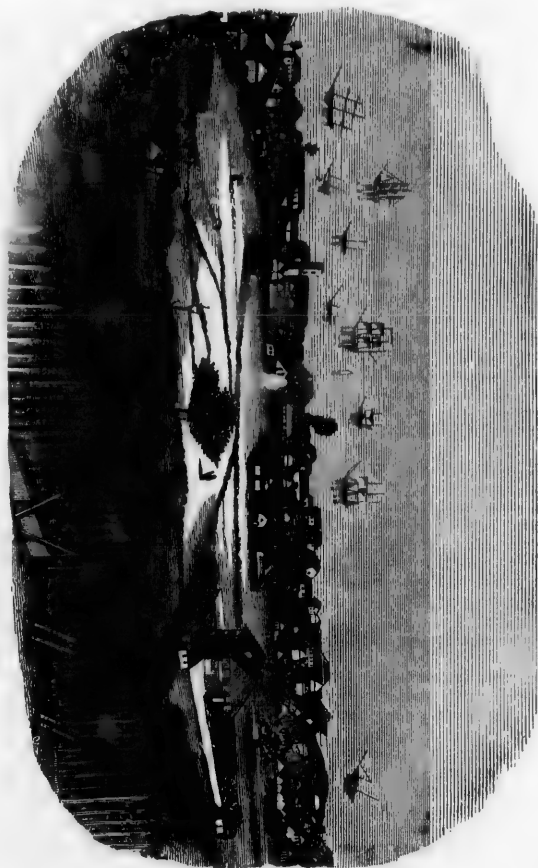
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Town, Sierra Leone, from the Governor's House



Indies, but standing far to the west, he fell in with land; being a portion of what is now called Brazil. By what may be called a "singular coincidence," this land lay within the limits assigned by the bull of Pope Alexander VI. to the Portuguese, when he partitioned worlds to be discovered or seized by Portugal and Spain. This was very annoying to the Spaniards, who thus had to share the continent with another and a rival power. Thus, without detracting from the glory that justly belongs to Columbus, we see that accident would have effected the great end, to the realization of which he devoted his life; so capricious are the decrees of fortune.

The first person who visited the American continent, was John Cabot, a Venetian merchant, who resided in Bristol, England. He made the discovery in 1497, somewhere on the coast of Labrador. He was accompanied by his more famous son, Sebastian Cabot.

So long ago as the reign of Philip II., it was proposed to cut a canal through the isthmus at Panama, for ship navigation, and engineers were sent to examine the country. "They, however," says a Spanish writer, "found the obstacles insuperable; and the council of the Indies at the same time represented to the king the injuries which such a canal would occasion to the monarchy; in consequence of which, his majesty decreed that no one should in future attempt, or even propose, such an undertaking under pain of death." The injuries feared were the *intrusion*, as Spain considered it, of foreigners into the "South sea," and the consequent weakening of the monopoly she then had of that portion of the world. The only human access to the Pacific at that time from the west, was through the strait of Magellan, the difficulty of navigating which was great. In 1666, eighteen years after the death of Philip II., the passage into the Pacific by the way of Cape Horn was discovered by two Hollanders, named Lemaire and Van Schonten, who named the promontory after their native place.

The first Englishman who entered the Pacific, was John Oxenham, who, in 1555, crossed the isthmus of Panama, at the head of a party of his countrymen, a body of semi-freebooters—built a ship, and made prizes of many Spanish ships. They were finally captured by the Spaniards, and most of them ignominiously executed at Panama. Drake was fortunate. He entered the Pacific by the strait of Magellan, and though he had but one small vessel—a schooner of a hundred tons, and sixty men, he inflicted great injury on the Spanish settlements, and commerce. This was in 1578-'9. The third of these *freebooters*, as they called themselves,

was Thomas Cavendish, who, in 1587, ravaged the western coast of America, and captured among other vessels the Galleon, that was on her way from Manilla to Acapulco. These "gentleman-rovers" were the illustrious predecessors of the bucaniers of the next century, and held that there was "no law beyond the line."

The first expedition ever undertaken by the English expressly in search of a north-west passage in the Pacific, was sent out in 1576, under the command of Martin Frobisher, a celebrated navigator in an age abounding in daring and accomplished mariners. Sixty years before, Sebastian Cabot discovered Hudson's strait.

The name America was first applied to this continent, or division of the globe, in 1507, in a work published by one Martin Waldseemüller, at St. Die, in Lorraine. The Spaniards never called their possessions by the name of America until about the middle of the 18th century. They gave them the name of the West Indies. The continent should be called Colonia, or Colonica, from the Italian name of its discoverer. This would do honor and justice to both his name and race.

The first person of the Anglo Saxon race, born within the limits of the United States, was Virginia Dare. She was born on the 18th of August, 1587. Her parents belonged to the company sent over by Raleigh, and who possessed the colony of Roanoke. The name of Virginia was given her from that of the country in which the colony was situated. Her fate, together with that of the entire population of the colony, is unknown. All perished, and, as Bancroft beautifully has it: "If America had no English town, it soon had English graves."

The French early reached this country, and, within seven years of the discovery of the continent, the fisheries of Newfoundland were known to the hardy mariners of Brittany and Normandy. In 1524, Verrazani, an Italian in the service of Francis I., ran along ahead the whole coast of North America, to the 50th degree of latitude. He saw the harbor of what is now New York, and noted its convenience and pleasantness; and for fifteen days his vessel lay in the beautiful haven of Newport. Jacques Cartier was the first person who sailed up the St. Lawrence, which he did in August, 1534. The next year, he made a second voyage to the same quarter, and sailed up the river to the site of the present city of Montreal. He took possession of these regions for France. All the earlier attempts at colonization failed, and it was not until the beginning of the 17th century, that under the direction of the celebrated Champlain, they succeeded.

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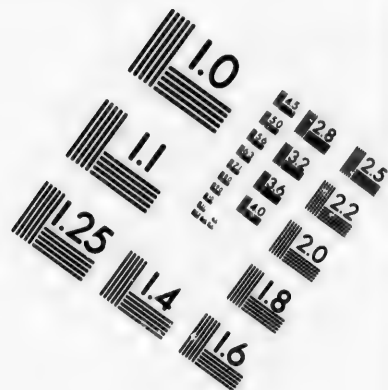
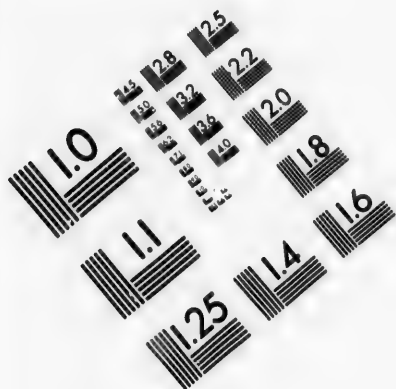
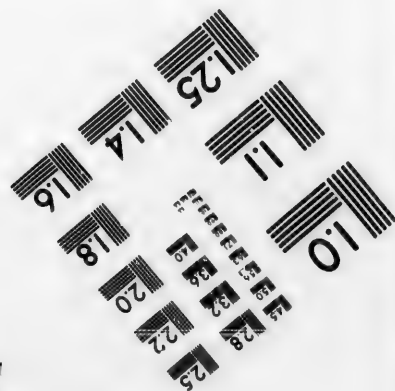
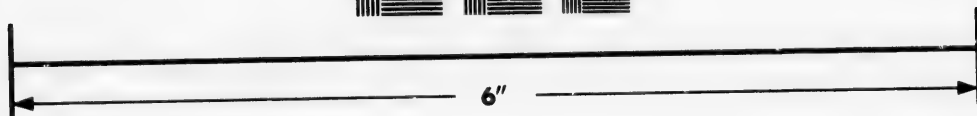
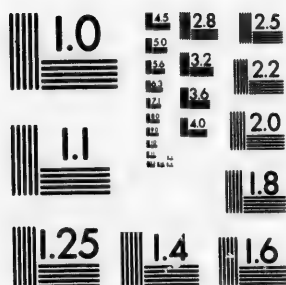


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JOHN WINTHROP,

FOUNDER OF THE CITY OF BOSTON, AND FIRST GOVERNOR OF MASSACHUSETTS.

BIOGRAPHY OF JOHN WINTHROP,

FIRST GOVERNOR OF MASSACHUSETTS.

WE know of nothing in the history of colonies marked with so many peculiarities, as the first settlement of New England. No others were ever founded for purposes strictly religious. Christian faith gave a tone to society that is still felt throughout the community. The belief of a special Providence directing all matters of government, and ordering its changes, visiting vice with temporal calamities, and giving peculiar aid to right motives, seemed to bring man into more immediate communication with his Maker, and to inspire him with high resolves.* It was in this way that the colonists sustained themselves through the difficulties and dangers which met them at every step, and which it was the daily, constant occupation of their lives to surmount. But for this principle, it would not be easy to understand fully the prevailing character of the early period of their history, and to judge aright of the principles which supported the fathers of New England in their struggles, situated as we are in the midst of ease and prosperity. Indeed the whole character of those who influenced and directed their councils, has never been correctly estimated. By some it has been viewed as a model for the present generation, possessed of every virtue, without blemish or reproach. Others have seen nothing but bigotry, hypocrisy, a spirit of persecution, gloomy superstition, and an absence of the social graces and virtues. Both of these views do violence to human nature, history, and truth. There is a manifest want of justice in deciding upon any portion of history in the abstract, or by views which are obtained in a more refined and cultivated state of society, where questions of natural right are better understood. A more correct judgment may be formed by taking into the estimate the general state of

* OUR PILGRIM FATHERS.—When our fathers fled from persecution in England, and sought an asylum in this country, they at first depended much upon the supplies of food from the mother-country. A company of them having at one time gone to the seashore, after looking anxiously for a vessel which was to bring them corn, and being disappointed, hunger induced them to search among the pebbles for something to satisfy the craving demands of nature.—And sincere was their gratitude to Him who "openeth his hand and satisfieth the desire of every living thing," when they found in the sand a kind of muscle, of which they partook, and found to be wholesome and nutritious. One day, after they had finished a hearty meal of this kind, a venerable old man stood up and returned thanks, by blessing God that he had fulfilled to them the promise made to Zebulon, DEUT. xxxiii, 19: "They shall offer sacrifices of righteousness, for they shall suck of the abundance of the seas, and of treasures hid in the sand."

society at the time, and any peculiarities in the combination of circumstances that go to form the aggregate. If we apply this rule to the early settlers of New England, we may lament the severities with which they visited differing shades of opinion and disrespect of authority, the readiness which they manifested to believe that the calamities which befell the erring, and their enemies, were instances of the Divine indignation. We could wish that some things had been otherwise, some we would blot out; but we can not join with those who tread with contempt upon their ashes, and condemn the principal features of their character. They were no common men who guided the sufferers from the vengeance of power to these shores. Virtue was strong; religion found her votaries, who were willing to quit the hearths and altars, the refinement and luxury of the old world, to erect temples to the Most High in the deep silence of our forests. We can not join in a general condemnation of those who fostered the good institutions that have descended to us; strengthened them against the violence of opposition; planted the seeds of liberty, now in full fruit; and cherished religion, till it became an essential element in the constitution of society. Surely it is some praise that they planted churches in every village; that, by the system of free schools, established in many towns so early as 1645, and by law in 1648, they sent the kindly influences of learning to the fireside of the humblest citizen; and, to crown all, founded that venerable university, which for two centuries has been the direct source of incalculable good to the people, and may be regarded as, in an important sense, the parent of many of the similar institutions in our land; and all this at a time when the people were few, and, by reason of their poverty, were obliged, for one year, to forbear laying the usual tax.

From a general view of our early history, we are satisfied, that the fathers of New England were upright, intelligent, and pious men, whose main endeavor was to strengthen the colonies they had planted, according to their ability; and that even their errors, in most instances, were the result of good motives, and an ardent desire to promote religion, learning, purity, and all the best interests of the community.

Governor WINTHROP, the subject of this biography, was born at Groton, in Suffolk, England, June 12, 1587; and was descended from an ancient and honorable family. His grandfather was an eminent lawyer, in the reign of Henry VIII., and attached to the reformation. His father was of the same profession, and the governor himself was bred a lawyer, in which character he was eminent

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WINTHROP, the subject of this born at Groton, in Suffolk, 1587; and was descended from an honorable family. His an eminent lawyer, in the III., and attached to the father was of the same profession himself was bred character he was eminent

for both integrity and abilities. Indeed, he must have had the fairest reputation, for he was appointed a justice of the peace at eighteen years of age.

When the design of settling a colony in New England was undertaken, Mr. Winthrop was chosen, with general consent, to conduct the enterprise. His estate, amounting to the value of six or seven hundred pounds sterling a year, he converted into money, and embarked his all to promote the settlement of New England. When he left Groton he was in the forty-third year of his age. He arrived at Salem with the Massachusetts charter, June 12, 1630.

To no one are we more indebted than to WINTHROP, not only for the manifold good which he did in his own day, but also for the history he has left us of the early transactions in church and state in New England, and especially in Massachusetts. His work, which, as we gather from him, was intended for publication and for posterity, was left by him in manuscript, in three parts. These had all been in the hands of Hubbard, Mather, and Prince, who it seems, had derived more assistance from them than they were ready to acknowledge. The first two parts, bringing the history down to 1644, were published at Hartford in Connecticut, in 1790. The third part was discovered in the tower of the old South church in Boston, in 1816. On collating the manuscript of the first two parts with the printed volume, the latter was found to contain many errors; and the whole work has been published by the Massachusetts Historical Society, with the assistance of the legislature of that state. The third part had never before been published. It continues the history down to the time of his death. Much interesting matter, and many important facts, are contained in this part. Of these, are relations of the various discussions between the magistrates and deputies relative to their respective powers; an account of the synod that met at Cambridge to establish the platform of church discipline and government; a defence against the charges which were raised to the prejudice of the colonists, by their enemies, and preferred before the commissioners in England. These all serve to fill up the delineation of the character of the fathers of New England to the middle of the seventeenth century.

The contents of WINTHROP'S "History of New England," are so various, that it is difficult to make an extract that will do justice to the author. But we select at a venture his "little speech," as he terms it. In 1645, when he was deputy governor, he was singled out from the rest of the magistrates, who had acted with him, to defend the legality

of his proceedings, in committing to prison certain persons in Hingham, who had been concerned in some disturbance of the peace, and who refused to find sureties for their appearance at court. The day of WINTHROP'S trial came, and he declined taking his seat upon the bench. Speaking of himself, as he does throughout, in the third person, he says: "The day appointed being come, the court assembled in the meetinghouse at Boston. Divers of the elders were present, and a great assembly of the people. The deputy governor, coming in with the rest of the magistrates, placed himself beneath, within the bar, and so sat uncovered. Some question was in court about his being in that place (for many both of the court and assembly were grieved at it). But the deputy telling them, that, being criminally accused, he might not sit as a judge in that cause, and if he were upon the bench, it would be a great disadvantage to him, for he could not take that liberty to plead the cause, which he ought to be allowed at the bar; upon this the court was satisfied."

Winthrop was fully and honorably acquitted of all the charges brought against him. The governor (Dudley) read the sentence of the court. "Then was the deputy governor desired by the court to go up and take his place again upon the bench, which he did accordingly, and the court being about to arise, he desired leave for a little speech, which was to this effect:—

"I suppose something may be expected from me, upon this charge that is befallen me, which moves me to speak now to you; yet I intend not to intermeddle in the proceedings of the court, or with any of the persons concerned therein. Only I bless God, that I see an issue of this troublesome business. I also acknowledge the justice of the court, and, for mine own part, I am well satisfied, I was publicly charged, and I am publicly and legally acquitted, which is all I did expect or desire. And though this be sufficient for my justification before men, yet not so before the God, who hath seen so much amiss in my dispensations (and even in this affair) as calls me to be humble. For to be publicly and criminally charged in this court, is matter of humiliation (and I desire to make a right use of it), notwithstanding I be thus acquitted. If her father had spit in her face (saith the Lord concerning Miriam), should she not have been ashamed seven days? Shame had lien upon her, whatever the occasion had been. I am unwilling to stay you from your urgent affairs, yet give me leave (upon this special occasion) to speak a little more to this assembly. It may be of some good use, to inform and rectify the judgment of some of the people, and may prevent such distempers as have

arisen amongst us. The great questions that have troubled the country, are about the authority of the magistrates and the liberty of the people. It is yourselves who have called us to this office, and being called by you, we have our authority from God, in way of an ordinance, such as hath the image of God eminently stamped upon it, the contempt and violation whereof hath been vindicated with examples of divine vengeance. I entreat you to consider, that, when you choose magistrates, you take them from among yourselves, men subject to like passions as you are. Therefore when you see infirmities in us, you should reflect upon your own, and that would make you bear the more with us, and not be severe censurers of the failings of your magistrates, when you have continual experience of the like infirmities in yourselves and others. We account him a good servant, who breaks not his covenant. The covenant between you and us is the oath you have taken of us, which is to this purpose, that we shall govern you, and judge your causes by the rules of God's laws and our own, according to our best skill. When you agree with a workman to build you a ship or house, &c., he undertakes as well for his skill as for his faithfulness, for it is his profession, and you pay him for both. But when you call one to be a magistrate, he doth not profess nor undertake to have sufficient skill for that office, nor can you furnish him with gifts, &c., therefore you must run the hazard of his skill and ability. But if he fail in faithfulness, which by his oath he is bound unto, that he must answer for. If it fall out that the case be clear to common apprehension, and the rule clear also, if he transgress here, the error is not in the skill, but in the evil of the will; it must be required of him. But if the cause be doubtful, or the rule doubtful, to men of such understanding and parts as your magistrates are, if your magistrates should err here, yourself must bear it.

"For the other point concerning liberty, I observe a great mistake in the country about that. There is a twofold liberty, natural (I mean as our nature is now corrupt) and civil or federal. The first is common to man with beasts and other creatures. By this, man, as he stands in relation to man simply, hath liberty to do what he lists; it is a liberty to evil as well as to good. This liberty is incompatible and inconsistent with authority, and can not endure the least restraint of the most just authority. The exercise and maintaining of this liberty make men grow more evil, and in time to be worse than brute beasts: ornnes sumus licentia deteriores. This is that great enemy of truth and peace, that wild beast, which all the ordinances of God

are bent against, to restrain and subdue it. The other kind of liberty I call civil or federal, it may also be termed moral, in reference to the covenant between God and man, in the moral law, and the politic covenants and constitutions, amongst men themselves. This liberty is the proper end and object of authority, and can not subsist without it; and it is liberty to that only which is good, just, and honest. This liberty you are to stand for, with the hazard (not only of your goods, but) of your lives, if need be. Whatsoever crosseth this, is not authority, but a distemper thereof. This liberty is maintained and exercised in a way of subjection to authority; it is of the same kind of liberty wherewith Christ hath made us free. The woman's own choice makes such a man her husband; yet being so chosen, he is her lord, and she is to be subject to him, yet in a way of liberty, not of bondage; and a true wife accounts her subjection her honor and freedom, and would not think her condition safe and free, but in her subjection to her husband's authority. Such is the liberty of the church under the authority of Christ, her king and husband; his yoke is so easy and sweet to her as a bride's ornaments; and if, through frowardness, or wantonness, &c., she shake it off, at any time, she is at no rest in her spirit, until she take it up again; and, whether her lord smiles upon her, and embraceth her in his arms, or whether he frowns, or rebukes, or smites her, she apprehends the sweetness of his love in all, and is refreshed, supported, and instructed, by every such dispensation of his authority over her. On the other side, ye know who they are that complain of this yoke, and say, 'Let us break their bands, &c., we will not have this man to rule over us.' Even so, brethren, it will be between you and your magistrates. If you stand for your natural corrupt liberties, and will do what is good in your own eyes, you will not endure the least weight of authority, but will murmur, and oppose, and be always striving to shake off that yoke; but if you will be satisfied to enjoy such civil and lawful liberties, such as Christ allows you, then will you quietly and cheerfully submit unto that authority which is set over you, in all the administrations of it, for your good. Wherein, if we fail at any time, we hope we shall be willing (by God's assistance) to hearken to good advice from any of you, or in any other way of God; so shall your liberties be preserved, in upholding the honor and power of authority amongst you."

It is a very full evidence of the esteem in which he was held, that, when many gentlemen of character, some of them of noble alliance, were concerned in the same undertaking with him, he, by a general voice, was



The Death Bed of Winthrop.

placed at their head. He says himself, in his excellent journal, which is indeed a treasure to all who revere the memory of their ancestors: "I was first chosen to be governor without my seeking or expectation, there being then divers other gentlemen, who, for their abilities, every way were far more fit."

He was eleven times chosen governor, and spent his whole estate in the public service. His son John, and his grandson, Fitz-John (who was a captain in Col. Reed's regiment at the Restoration in 1660), were successively governors of Connecticut colony, and Wait-Still, another grandson, was chief justice of Massachusetts. Stephen, another son of the elder Winthrop, went to England in 1645 or 1646, had the command of a regiment, and succeeded Harrison in his major-generalship, was a member of parliament for Scotland in 1656, and was much trusted by the Protector. The family, in every generation, have occupied high stations, and been deservedly held in great respect. Its character is now most worthily sustained by the Hon. ROBERT C. WINTHROP, the distinguished and eloquent speaker of the house of representatives, in the United States' Congress; and the Hon. DAVID SEARS, of Boston. This latter gentleman has been repeatedly a member of the legislature of Massachusetts, as both representative and senator, between the years 1816

and 1826. Governor WINTHROP died March 26, 1649, in the 62d year of his age, and was buried April 3d, in the northern corner of the King's chapel burying-ground. We may truly say of him, as he finely said of the husband of Lady Arabella Johnson, "He was a holy man and wise, and died in sweet peace." He conducted himself with such address and unshaken rectitude, as to render his character universally respected among his contemporaries, and his memory dear to posterity. In his magnanimity, disinterestedness, moderation, and harmonious character, the father of Massachusetts reminds us of the great "father of his country," and is the only name in our history worthy to stand as a parallel to WASHINGTON.

"How shall we mourn thee?—with a lofty trust,
Our life's immortal birthright from above!
With a glad faith, whose eye, to track the just,
Through shades and mysteries lifts a glance of love,
And yet can weep! for nature thus deplores
The friend that leaves us, though for happier shores.
"Praise! for yet one more name with power endowed,
To cheer and guide us, onward as we press,
Yet one more image, on the heart bestowed,
To dwell there, beautiful in holiness!
Thine, WINTHROP, thine! whose memory from the dead,
Shines as the star which to the SAVIOUR led."

THE WINTHROP FAMILY TOMB, IN KING'S CHAPEL BURYING-GROUND,
TREMONT STREET, BOSTON.

This ancient Monument originally had inscribed on it the Epitaph which is given below; but it is said that the letters having become nearly obliterated by time, or injured by accident or design, during the Revolution, the stone was replaced by another, which bears the names and ages of the members of the family as follows:—

JOHN WINTHROP,
GOVERNOR OF MASSACHUSETTS;
Died 1649.

MAJOR-GENERAL

WAIT STILL WINTHROP,
Died September 7th, 1717. Aged 76 Years.

ANN WINTHROP SEARS,
The Wife of DAVID SEARS,
Died Oct. 2d, 1789. Aged 33 Years.

Here also rest the remains of JOHN WINTHROP, first Governor of Connecticut, [eldest son of JOHN, the Founder of Boston, and first Governor of Massachusetts.] He died at Boston, 5th April, 1676.

FITZ-JOHN WINTHROP, his son, Governor of Connecticut, died at Boston, 27th November, 1707.

THOMAS L. WINTHROP, Lieutenant-Governor of Massachusetts, died 22d Feb. 1840.

STAND TRAVELLER,

And admire ye Tomb,
And to ye Public Tears add your own,
Bewail ye public Loss,
If of ye publick you are part.
This place is a Prince's Court
Rather than a Tomb.
This marble covers dust
Worthy to be enclosed in Gold.
Four WINTHROPS lie buried in this Tomb,
Who were sufficient to enrich ev'n ye four quarters of
ye Earth.

He is unacquainted with ye history of New England
Who is ignorant of this Family,
And he has no regard for Universal Virtue
That does not highly value it.

The last of these
here interr'd
Was WAIT WINTHROP, Esq;
Whose last Honour was this,
That he was Governour of New England,
He was, alas! he was
Of New England, ye glory & Defence,
The Light and Stay.
Major-General of Massachusetts's Colony,
Of a noble yet peaceful disposition,
And who for his Country and for Peace could die,
President of ye Council for ye Province,
Whose chiefest care it always was
That ye Commonwealth might receive no damage;
And in whom many died.

Chief Judge,
Who paid an equal regard to Justice & Clemency.
He went thro' ye most honourable
Stations in ye Government,

And adorn'd ye Honours w'ch he bore,
Deserving those he bore not.
A person of ye most undissembled piety
And unspotted probity,
Of an exalted yet a modest Genius.
He placed all things beneath himself,
Himself beneath all men.

Benevolent tow'rds all,
And most so tow'rds ye poor & needy.
Injurious to none not even to enemies;
An enemy to none,
Ev'n tho' highly provok'd.

No unhappy person was by him rejected,
Nor poor one refus'd admittance,
Nor did any go away displeas'd.

He was skillfull in physick,
And being possessed of Golden Secrets,
Indeed more valuable than Gold itself,
And having obtained Universal Remedies,
Which Hippocrates & Helmont never knew,
All that were sick where e'er he came

He freely restor'd to health,
And made almost his whole study of Nature
Subservient to Medicine.

He that under this stone now sleeps in death,
Still lives in ye hearts of thousands
Whose lives he has prolonged.

The merits of WINTHROP with Him
Oblivion shall not bury.

He was born ye 27th day of December 1641,
Died ye 7th day of September 1717,
In ye 76th year of his age.

They who value Life & still enjoy It,
Wish'd him a Thousand years continuance here,
An age exceeding that of Methusalem.

BURYING-GROUND,

Epitaph which is given
erated by time, or injured
placed by another, which
ws:—

TTTS,

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ars.

RS,

ernor of Connecticut,
or of Massachusetts.]

died at Boston, 27th

achusetts, died 22d

Honours w'ch he bore,
those he bore not.
most undissembled piety
spotted probity,
yet a modest Genius,
things beneath himself,
beneath all men.

dent tow'rds all,
w'ds ye poor & needy,
e not even to enemies;
emy to none,
highly provok'd.
on was by him rejected,
e refus'd admittance,
go away displeas'd.
killfull in physick,
essed of Golden Secrets,
uable than Gold itself,
ned Universal Remedies,
& Helmont never knew,
ck where e'er he came
restor'd to health,
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nt to Medicine.
stone now sleeps in death,
e hearts of thousands
he has prolonged.
WINTHROP with Him
shall not bury.
th day of December 1641,
y of September 1717,
year of his age.
Life & still enjoy it,
and years continuance here,
ng that of Methusalem.

THE SOVEREIGNS OF EUROPE.

EIGHT of the twenty monarchs are protestants; nine are Roman catholics; two are of the Greek church, and one is a Mohammedan. Those belonging to the Greek church are the emperor of Russia and the king of Greece. Four of them are of irreproachable characters. Many of them are as respectable as our public men whom we delight to honor. The queens are all of spotless character, which could not have been said of former times.

The king of Prussia is a decidedly pious man. Several of the queens are true Christians, as I think, and among these is the queen of France. She reads many religious books. As to talent, Louis Philippe, king of the French, the king of Prussia, and the emperor of Russia, are admitted to rank first, and Louis Philippe stands pre-eminently above all. He was educated at a French college, spent many years in foreign lands, and then sixteen in quietly pursuing his studies. Talleyrand said he had no idea of his vast acquirements, before he was minister, after he became king. He speaks English with ease, and never pronounces but one word wrong, which is *ice*, which he calls *hice*. He said, he and his brother hired a boat at Pittsburgh, to go down the river, but was obstructed by the *hice*. This he had learned from the English cockneys, when he lived in England. He has no minister who is equal.

The king of Prussia is nearly the equal of Louis Philippe; he speaks English well, but not so well as the king of the French. He is a self-made man. He was not allowed to get his education at the German universities, as he desired, as it was thought degrading to the king's son, to associate with other young men. He regrets to this day, that he was not permitted to go to the university and associate with the students. The king of Sweden graduated at college, and is a fine scholar.

The king of Prussia is not popular. He is too good a man for that. He proposes too many reforms, and pushes them forward with too much energy to please the people.

The emperor of Russia is not inferior in talent; but he came unexpectedly to the throne at the age of twenty-seven or twenty-eight years—his brother, the lawful heir to the throne, having abdicated in his favor. He has had no time to read. Being a resolute monarch, his duties are most arduous. He is most devoted to public affairs. I spoke to him about temperance societies, when he began to make the same objections which were once so common here—that brandy was necessary for laborers to give them strength, and protect them in heat and cold. He however, at once perceived the force of my arguments,

admitted their correctness, and said, "As for the revenue we will let it go, and get a revenue somewhere else." Nicholas is very decided and independent.

A nobleman of great wealth and talent had governed his brother Alexander. When Nicholas came to the throne, in less than three days he came to see him unasked. Nicholas said to him, "Who asked you to appear before me? I know how you governed my brother, and imposed upon his meekness. I give you three days to arrange your affairs in St. Petersburg, after which time you will retire to your country-seat;" which he did, and has remained there ever since.

The king of Sweden is a literary man, and is the author of several books. He gave me a copy of his work on prison discipline, just published. The king of Holland is not so popular; he is an old man, about forty-four. He was distinguished at the battle of Waterloo, and badly wounded. The king of Denmark is a man of fair talents, but of no decision of character. [Since this account was written, the king here referred to has died, and Frederick VII. has succeeded to the throne. His first acts have been liberal, and give promise of a good and enlightened sovereign.]

The manners of the princes are polished, easy, and simple. Such is the character of the nobles of Europe, whom I have seen. They are, however, more formal to diplomats. There is more difficulty to get along with our distinguished men, who sometimes assume a tone of haughtiness, which I never saw in a prince. The monarchs ordinarily, and their queens, dress in the same plain way as other well-bred people. In public, they of course appear in splendor. The queens wear on ordinary occasions very little jewelry.

In the families of the emperor of Russia, and the king of the French, there is great affection.—R. BAIRD.

MORAL CHARACTER OF THE MONKEY.

A GENTLEMAN whose premises were infested by a large breed of sparrows, said they were *birds of no principle*. Of all monkeys it may be said, with much more propriety, that they are beasts of no principle: for they have every evil quality, and not one good one. They are saucy and insolent; always making an attempt to bully, and terrify people, and biting those first who are afraid of them. An impertinent curiosity runs through all their actions; they never can let things alone, but must know what is going forward. If a pot or a kettle is set on the fire, and the cook turns

her back, the monkey whips off the cover to see what she has put into it; even though he can not get at it, without setting his feet upon the hot bars of the grate. Mimicry is another of the monkey's qualities. Whatever he sees men do, he must affect to do the like himself. He seems to have no rule of his own, and so is ruled by the actions of men or beasts; as weak people follow the fashion of the world, whether it be good or bad. No monkey has any sense of gratitude, but takes his victuals with a snatch, and then grins in the face of the person that gives it to him, lest he should take it away again; for he supposes that all men will snatch away what they can lay hold of, as all monkeys do. Through an invincible selfishness, no monkey considers any individual but himself, as the poor cat found to her cost, when the monkey burned her paws with raking his chestnuts out of the fire. They can never eat together in company without quarrelling and plundering one another. Every monkey delights in mischief, and can not help doing it, when it is in his power. If anything he takes hold of can be broken or spoiled, he is sure to find the way of doing it; and, he chatters with pleasure, when he hears the noise of a china vessel smashed to pieces upon the pavement. If he takes up a bottle of ink, he empties it upon the floor. He unfolds all your papers, and scatters them about the room, and what he can not undo, he tears to pieces; and, it is wonderful to see how much of this work he will do in a few minutes when he happens to get loose. Everybody has heard of the monkey whose curiosity led him to the mouth of a cannon to see how it went off; when he paid for his peeping with the loss of his head. In a ship, while the men were busy in fetching powder from below, and making cartridges, a monkey on board took up a lighted candle, and ran down to the powder-room to see what they were about; but happily was overtaken just as he got to the lantern, and thrown out at the nearest port-hole into the sea, with the lighted candle in his hand. Another lost his life by the spirit of mimicry; he had seen his master shaving his own face, and at the first opportunity, took up the razor to shave himself, and made shift to cut his own throat. When the wild monkeys have escaped to the tops of trees, the people below who want to catch them, show them the use of gloves, by putting them on and pulling them off repeatedly; and when the monkeys are supposed to have taken the hint, they leave plenty of gloves on the ground, having first lined them with pitch. The monkeys come down, put on the gloves, but can not pull them off again; and when they are surprised, betaking themselves to the trees as usual, they slide back-

ward and are taken. A monkey who had seen his mistress upon her pillow in a nightcap, which at her rising, she pulled off and hung upon a chair, puts on the cap, lays his head upon the pillow, and by personating the lady, made himself ten times more frightful and ridiculous; as awkward people do, when they ape their superiors, and affect a fashion which is above their sphere. A mischievous disposition is always inclined to persecution. There are minds whose greatest pleasure it is to ride and tease the minds of other people. A gentleman in the country kept a monkey, who took to riding his hogs, especially one of them, which he commonly singled out as fittest for his use; and, leaping upon its back, with his face toward the tail, he whipped it unmercifully, and drove it about till it could run no longer. The hogs lived under such continual terrors of mind, that when the monkey first came abroad in the morning, they used to set up a great cry at the sight of him. A well-known nobleman once had a wild horse, whom nobody could ride. "I know not what your lordship can do with him," said one, "but to set the monkey upon his back." So they put a pad on the horse, and set the monkey upon it with a switch in his hand, which he used upon the horse, and set him into a furious kicking and galloping; but Pug kept his seat and exercised his switch. The horse lay down upon the ground; but when he threw himself on one side, the monkey was up on the other; he ran into a wood with him to brush him off; but, if a tree or a bush occurred on one side, the monkey slipped to the other side; till at last the horse was so sickened, and fatigued, and broken-spirited, that he ran home to the stable for protection. When the monkey was removed, a boy mounted him, who managed the horse with ease, and he never gave any trouble afterward. In all the actions of the monkey, there is no appearance of anything good or useful, nor any species of evil that is wanting in them. They are, indeed, like to mankind; they can ride a pig as a man rides a horse, or better, and are most excellent jockeys; but after all, they are only like the worst of the human species. If all the qualities of the monkey were put together, they constitute what is properly called *ill-nature*; and, if any person would know what an ill-natured man is, that man is a monkey to all intents and purposes, with the addition of reason, which makes his character much worse, and the loss of religion and conscience, which is worst of all; for without these, reason is rather a disadvantage.

LIFE.—The advantage of living does not consist in length of days, but in the right improvement of them.



Present Appearance of Jerusalem.

TRAVELS IN THE HOLY LAND.—No. 5.

BY HARRIET MARTINEAU.

OUR last view of Jerusalem was very fine. We looked back from a ridge on the northern road, and saw it lying, bright and stately, on its everlasting hills; but it looked lower than from most other points of view, from the Moab mountains forming its lofty background. We descended the slope before us, and lost sight of the holy city for ever.

Again we were struck with the vivid coloring of the scenery. All this day, the hills were dressed in brilliant hues: the soil, red, gray, and brown; the tilled portions of the brightest green; and the shadows purple or lilac. All the hills show traces of having been once terraced; and they were still completely so in the neighborhood of our encampment this evening—the terraces following the strata of the stone, which all lay slanting. This gives a singular air of wildness to the most cultivated spots. Here and there were basins among the hills, the red soil dropped all over with fig and olive-trees, or full of corn; and the upland tracks winding among slopes all strewn with cistus, iris, cyclamen, and anemones, and bristling with tall flowering hollyhocks. On we went, past deep old wells yawning in the hollows, or stone cisterns where the cattle were crowding to drink; past a few camels here and there, browsing in the dells; past groups of Arabs with their assees, carrying corn to the city; past stone villages crowning the steep, till at 6 p. m., we encamped beside a beautiful old pool. We were under the shelter

of a rock whose moist crevices were fringed with delicate ferns. While dinner was preparing, I went back on our road—the narrow stony road which wound round the verdant promontory opposite to our rock—to find a honeysuckle which I had seen climbing and blossoming to a great height; and I brought back a charming handful of flowers.

While we were at dinner in the tent, a sound of scuffling was heard outside; and when our dragoman next entered, he was out of breath. We afterward heard the whole story, and were amused to find how zealous our Mohammedan servants could be in the cause of Christians. Some Arabs, with their loaded mules, had come with the intention of encamping beside the pool; and, on finding the ground partly occupied, though there was plenty of room left, they became abusive, and wondered aloud what business these cursed Christians had in their country. Our dragoman resented this, and threw the speaker down over the tent-ropes. There was then a stout scuffle, and our cook coming to help, and the Arabs falling one upon another over the tent-pegs in the dark, they had the worst of it, and went off vowing vengeance. We heard no more of them, however.

The next morning, we saw the Mediterranean, like a basin of deep blue water between two hills. We were not going toward it, however, but to Nablons, the ancient Sychar; where lies that Jacob's well, at which the woman of Samaria was wont to draw water.

Our road lay through a most fertile valley now called Hawarrah, where the crops were splendid for miles, and the villages were thick-

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Terrace Cultivation.

ly planted on the hills. The ground rose in a series of table-lands, of which there was a succession of three, when we were leaving the rich Hawarrah valley. The roads in this part of the holy land were mere lanes full of stones between walls, or tracks through olive grounds and meadows, or paths running along shelves of the rocks, with a bit of rocky staircase at each end, about ascending or descending which our good horses made no difficulty.

Before entering the valley where old Sychar lay between the mountains Ebal and Gerizim, we came to the fine fertile parcel of ground which Jacob bought. The valley opens out into this wide basin; and near the junction of the valley and the basin is the old well which is the supposed scene of the conversation of Jesus with the Samaritan woman. Some of our party wound round the base of the hill to the well; and some (and I for one) rode by the upper path, over the shoulder of the hill, and came down on the other side. I had thus a fine view of the whole locality; of the valley where the city lies—a narrow valley, rich with fig and olive-groves, and overhung by the rocky bases of Ebal and Gerizim, where the square black entrances of tombs dotted the strata of the rocks. From this height, Jacob's land looked a beautiful expanse. The well is a mere rough heap of stones, with a hole in

the middle, nearly closed up. What there is below-ground, I can not say; but this is all that is to be seen on the surface. It is not a well likely to be in use now, for there are many springs and shallow cisterns (though no well) between this and the town, which lies about a mile and a half off.

Everybody knows that the Jews had no friendly dealings with the Samaritans in the time of Jesus. The quarrel had then lasted above 500 years. How many suns had gone down upon their wrath! The Samaritans had wished to assist the Jews in rebuilding the temple of Jerusalem; but the Jews hated them as a mixed race, and would not admit that they had any right to share in temple worship, or any other Jewish privileges. It really was a most serious objection to the Samaritans, that they were of a mixed race; not only because the Jews believed that they held the promises on the very ground of the purity of their race; but because the intermarriages of the former Samaritan Israelites with Assyrians and others disposed them to idolatry, or at least to a worship as mixed as their race. So the Samaritans were excluded from the rebuilding of the temple, above 500 years B.C. And not being permitted to help, they did all they could to hinder. About 100 years after, they obtained leave from the Per-



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sian court (to which both the Jews and they were subject), to build a second temple to Jehovah; and they build it on Mount Gerizim. This was a shocking impiety in the sight of the Jews; and it was the occasion of a number of lax-minded Jews, who had broken the law, by marrying heathen wives, or otherwise, and who yet wished to worship Jehovah in the temple, resorting to Sychar, to join the Samaritans, and render their race yet more mixed. This was the quarrel which the woman of Samaria referred to when she spoke of the question, whether "men ought to worship in this mountain or in Jerusalem!" and thus is explained her wonder that Jesus, being a Jew, should ask water of her who was a Samaritan. There was also a quarrel about their Scriptures; the Jews insisting to this day, that the Samaritans had altered two or three texts, relating to these two mountains, Ebal and Gerizim, in their own sacred copy of the books of Moses; the Samaritans insisting, of course, that theirs was the true copy.

From my early youth, I had always taken a strong interest in this old quarrel, feeling sympathy with both parties, and a keen delight in the wise and soothing words of Jesus concerning it. What a truth it was for both parties to hear, that God was now to be worshipped everywhere; and that all places were henceforth to be as sacred as the Jerusalem temple, or the mountain at Sychar! And what a lesson in liberality it was to the Jews when he gave honor to the Samaritan in the parable, on account of his good works, above the sacred priest and the servant of the temple at Jerusalem. Both parties were, of course, wrong in their fierce anger; but each had much to plead on his own side. The Jews were bound to keep their race and worship pure; and held, as an essential matter of faith, that Jehovah would have but one dwelling-place; which was their view of their temple. And the Samaritans were surely right in persisting in their endeavor to worship Jehovah, in accordance with the laws of Moses, as they did not believe in strange gods; and, if the Jews could not admit them to worship in the temple at Jerusalem, they could not be blamed for building one for themselves.

Such was always my view of the matter: and such being my view, it was with indescribable interest that I looked this day upon Mount Gerizim, and remembered that somewhere in the city we were approaching, was treasured that sacred copy of the Samaritan Pentateuch (books of Moses) which the possessors believe to be the true one, and to be 3,500 years old. The most learned men among the Christians do not believe it to be nearly so old as that: but they have a high

opinion of its value, and would follow it sooner than any other, I believe, excepting instances where the disputed texts about Ebal and Gerizim are concerned.

The present inhabitants of the city hate the Christians as heartily as the old inhabitants used to hate the Jews. The present inhabitants are Mohammedans of a most bigoted character; and they would admit neither Jews nor Christians within their gates, till within a few years; when the government of the country (then Egyptian) compelled them to better manners. They dared not refuse us admission; but they behaved with great insolence. We had to ride from end to end of the city, our tents being pitched on a green on the other side. Our horses had to go as slowly as possible through the narrow street, which would not hold two abreast, and was paved with large slippery stones. As we rode along, one behind another, at this funeral pace, all the people came out to stare, and many to mock. Three times, things were thrown in my face; men and women laughed and sneered, and children thrust out their tongues. I felt what a lesson this was to intolerance about matters of opinion. These people hold a faith which is very noble and beautiful. Few of us know how noble and beautiful is the Mohammedan faith. And there is no need to say what their visitors thought of the Christian faith as they hold it; and yet, what a scene of hatred and misunderstanding was here! And thus it is, but too often, in the streets of other cities, where men ought to know better than to despise each other for worshipping the same God in a different manner. In the streets of other cities, men take upon themselves to pity and despise one another, with no better knowledge in reality of one another's views and feelings, than these Mohammedans had of ours, or we of theirs.

At last, we were through! and glad I was to issue from the gate at the further end. But a sad sight awaited us there. A company of lepers were under the trees, crying out to us for charity, and stretching out their maimed hands. It is a terrible sight, which we see too often in that country. It saddened us at Jerusalem, almost every day.

Our tents were pitched on a weedy plot of ground, among gardens, orchards, and rippling streams, and looking up to Ebal on the one side, and Gerizim on the other. Ebal is still the sterner-looking mountain of the two; but Gerizim has lost much of its fertility. Both have tombs and votive buildings on them, which show them to have been places of pilgrimage.

After dinner, we ascended a height, past the Mohammedan cemetery, whence we had a fine view, in the last sunlight, of this most beauti-

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ve ascended a height, past the metery, whence we had a fine sunlight, of this most beauti-

ful city. It was once the capital of Samaria; and it is still, and must ever be, from its situation, a very striking place. It completely fills the valley, from side to side, and ascends a little way up the skirts of Gerizim. Its houses, with their flat white roofs, are hedged in by the groves which surround the town: vines spread from roof to roof, and from court to court; two or three palas spring up in the midst, and higher aloft still, a graceful minaret here and there.

Then, to my delight, we descended to seek the Samaritan synagogue. We were guided to it, and I saw nearly all the Samaritans of the place; good-looking people, the men wearing the high, helmet-like turban which we see in the portraits of Josephus, and other old Jews. They said their number was sixty in this place, and about forty more elsewhere—only a hundred in the whole world. They declared their chief priest and the rest of their sect to be at Genoa. They keep three great feasts in the year, going up Gerizim as the Jews used to go up to the temple.

The synagogue was a small, ordinary-looking chapel, within a curtained recess of which is kept the old copy of the Pentateuch. It was shown to us, after some entreaty on our part; but I found it was impossible that I could be allowed to touch it.

I felt it a great event to have seen it. It is written on a sort of vellum, in the Samaritan text, clear, small, and even. The vellum is tattered; but it is well mounted on parchment. The priest himself dares not touch the MS. without careful purification; and he holds it by the ends of the rollers on which it is fixed as a scroll, like the copies of the Jewish law in synagogues.

We were lighted through the archways of the street, on our way home, and down the hill, by a single candle which burned steadily in the still air.

Our employment this evening was reading aloud the history of the Jewish and Samaritan controversy, and the fourth chapter of the gospel of John. While we were thus reading in our tent, the jackal was in full cry on the slopes of Gerizim.

We passed the night of the 14th of April in our tents, just outside the town of Jenin. Our dragoman had warned us of the thievish character of the people of this neighborhood, so that we had an eye to such of our property as was lying about while the tents were preparing. The governor called, had coffee, and appointed four guards; so that we supposed ourselves safe from robbery. But in the morning the best mule was gone: and the four guards declared themselves wholly unable to say when, how, and by whom, the animal was set loose from its fastenings and carried off.

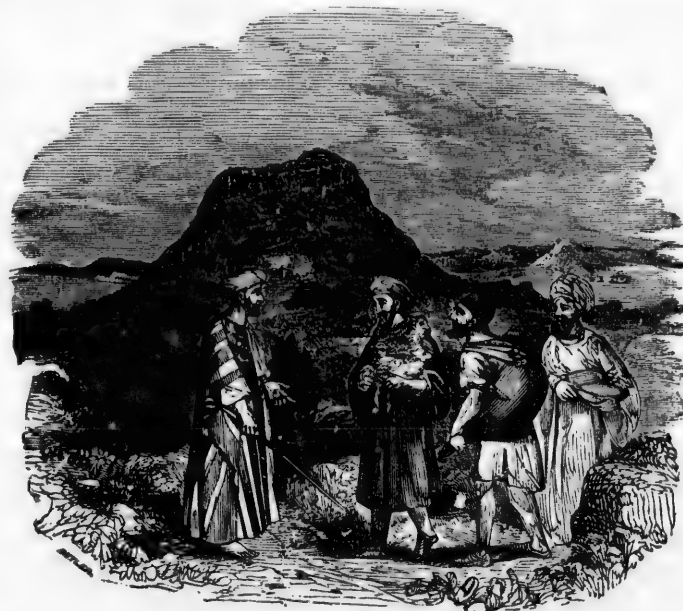
Our departure was delayed: the governor was sent for; and a pretended inquiry was made: and this gave me opportunity to walk about for an hour after breakfast—through the little town, through an orange grove where every tree was white with blossom; and up a neighboring hill, whence I saw, to my surprise, a snowy mountain peak to the northeast. This was the summit of Gebel Sheikh—the mountain which closes in the north end of the valley of the Jordan, and then joins on to the range of Antilibanus. From my point of view, I could see too the beautiful plain of Esdraelon which we were to traverse this day; and the hills to the north which enclosed Nazareth, where we hoped to sleep this night; and to the west, some tokens of the rise of a line of hills which we should soon see swelling into Mount Carmel, where we were to go to-morrow. What a prospect lay before both eye and mind!

Our dragoman told us we might make ourselves easy about our mule. He had no doubt it was in some stable in the town. We should be asked to leave a muleteer behind, and in a day or two the animal would be delivered to him, with a demand of a few piastres for the trouble of finding the mule on the mountains. It is probable that matters stood exactly so, for the muleteer followed in two days with the beast, having paid fourteen piastres for the trouble of finding it!

Thus far, we had travelled only among hills and along valleys; and to-day we heartily enjoyed our ride over the rich plain of Esdraelon. It was fertile and flowery from end to end; and the young partridges ran under the very feet of my horse. Small birds flitted in multitudes on every side; and tall cranes stood among the high grass. The Carmel range grew upon the sight, as we had expected; and the blue hills of Galilee closed in the view northward. Little Mount Hermon rose on our sight; and on its north acclivity lay the village of Nain. A round hill, dropped over with old oaks, was Mount Tabor. Villages were well placed on such rising grounds as there were amidst the plain; and our track lay, broad, level, and green, among rows of tall artichokes and patches of rich cultivation.

When about two thirds of the way over, we crossed the great caravan track from Egypt to Damascus. We had been to Egypt, and we were going to Damascus; but we did not follow this track. We held on northward, to the Galilean hills.

We entered among these hills about an hour before we reached Nazareth, winding up and down, and round the base of one, and the shoulder of another, sometimes among scattered wood, sometimes over stony tracts, and always in sight of many goats. After mount-



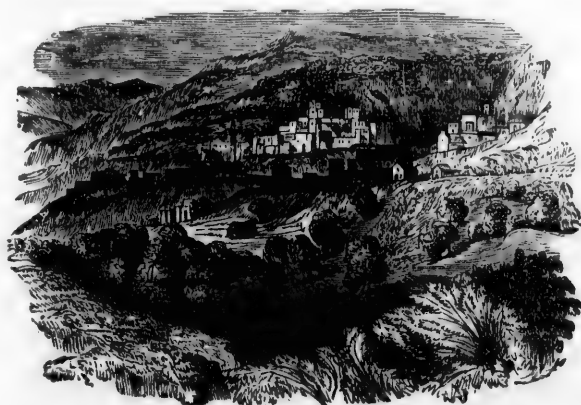
Mount Carmel.

ing a very steep pass, and coming to a well, and winding round a hill once more, we came suddenly in sight of pretty Nazareth. Its basin of fertility is charming—its little plain, full of gardens and groves and fields, surrounded, as it seemed, completely by hills. The town is in fact a poor one; but, built of stone, and covering a good deal of ground, and extending a little way up the western slopes, it looks well from above.

Here, then, we had before our eyes the scenery amidst which Jesus grew up. Its character can not have changed very much since his day. A fertile basin among the everlasting hills, and the primitive little town which they protect, must bear much the same aspect from age to age. The great addition is the convent and church of the Latin monks: but these buildings do not stand out offensively to the eye; but mingle well with the flat-roofed stone houses of the town. In this convent we had to take up our abode. We longed to pitch our tents on the green below the town: but there was apprehension of rain, and it was thought better to go under the convent roof; which is truly a hospitable one.

I do not know what it is about the services of this church which is so affecting to strangers: but I observe that all travellers speak of the strong emotions excited here. Few believe that the places under the church are what they are said to be. Few believe that the little caves shown by the monks are the kitchen and sitting-room of the parents of Jesus; and that the spots marked out by two granite pillars are those where Mary and the angel stood at the time of the annunciation. I do not at all believe that these places were thus consecrated: yet I have seldom been so moved as I was this afternoon in the church of the annunciation at Nazareth. We were at least in the place of residence of Jesus, and saw what he saw every day; the hollows of the valleys, the outlines of the hills, the streams in their courses, and the wild flowers which everywhere on the slopes spread under foot. We were in the place which he called home. Entering the church with these impressions on our minds, we were saluted with a chant from a full choir; a chant sonorous, swelling, and exact; the best music, incomparably, that I heard abroad. It told upon our very hearts.

Of course, we visited the rocky recesses



Nazareth.

below the church which are called the abode of Joseph and Mary; and saw no reason to suppose that, while citizens of Nazareth, they lived in a grotto, rather than a house. We were shown too a portrait of Jesus, which the monks believe to have been copied from an original taken in his lifetime!—as if there had been portrait-painting of that kind in those days! and as if the Jews would have considered it lawful if they had! Such ignorance on the part of the monks prevents our relying on any traditions given by them: and I will therefore say nothing of the other places pointed out as sacred by them. Nazareth itself is sacred enough; and it is merely offensive to one's feelings to speak of some of the strange stories the monks tell, and really believe, about Jesus and his family, in exhibiting what they declare to be the scenes of his life and daily actions.

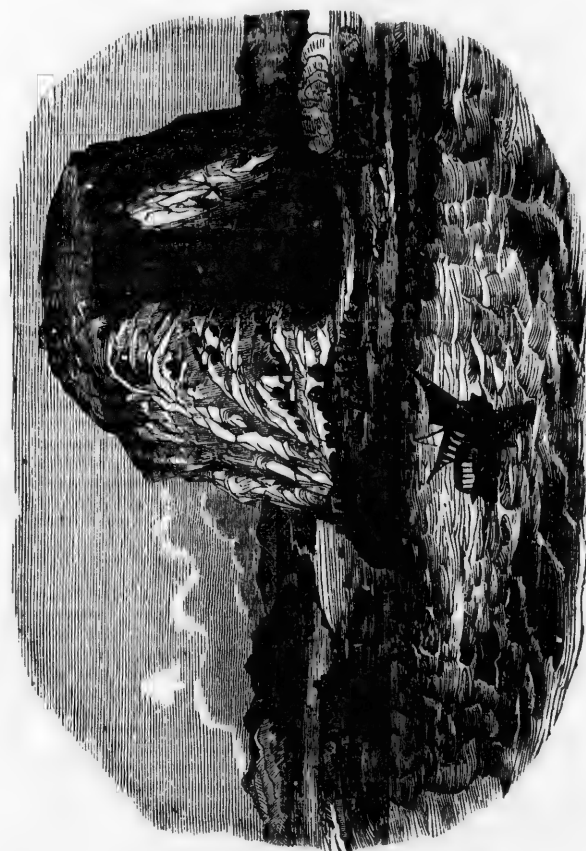
The next day, the uppermost feeling throughout was of delight at the thought of the natural beauty amidst which Jesus was reared. From the heights above the town we looked down into dells full of verdure; and abroad over the rich plain we had crossed the day before, and over toward Carmel, where we were going to-day. We rode among the hills for two hours, observing that clumps of forest trees became more frequent, and that the scenery was changing its character: and then we entered upon a tract which was so like the outskirts of an English nobleman's park that I could hardly believe we were in the holy land. Rich grasses covered the slopes and levels, and clumps of ilex wooded every recess. We wound along under these clumps,

and along the glades of the scattered forest, and up broken banks, and then again through reaches of chequered shade. And how could we help thinking at every step who had once been here before us!

We were almost sorry to leave these park-like hills, through we were descending into the plain of Zabulon, and Carmel was before us, and we were about to cross the old river Kishon which Elijah knew so well when he lived in this region; and the blue sea was in sight; that sea from which Elijah's servant saw the cloud arise which was no bigger than a man's hand.

We rode at the foot of Carmel, keeping the river Kishon for the most part on the right hand. There could not be a finer place of assemblage than this plain for the children of Israel, and the worshippers of the sun (Baal) when Elijah summoned them to meet. From the foot of Mount Carmel, which stands out boldly into the sea, the beach stretches northward in a fine sweep of fifteen miles to Acre, and the old Tyre. The plain of Zabulon, thus enclosed between the Galilean hills, Carmel, and the sea, held the assembled multitude on that great day. The worship of the sun was very imposing in all the countries where it subsisted. We have all heard of it as the worship of Apollo in Greece. I saw mighty temples to the same god, under the name of Ra, in Egypt and Nubia; and under the name of Baal at Baalbec—a few days' journey from this place at the foot of Carmel, where his hosts of priests were defied by Elijah (1 Kings xviii.) Here stood his four hundred and fifty prophets, in all their pomp.

what it is about the services which is so affecting to strangers: at all travellers speak of the excited here. Few believe under the church are what they Few believe that the little the monks are the kitchen of the parents of Jesus; and marked out by two granite pillars Mary and the angel stood the annunciation. I do not at these places were thus conceived have seldom been so moved in the church of the Nazareth. We were at least residence of Jesus, and saw every day; the hollows of the hills, the streams and the wild flowers which the slopes spread under foot. place which he called home. church with these impressions were saluted with a chant; a chant sonorous, swelling, best music, incomparably, that It told upon our very hearts. We visited the rocky recesses



Frontonary of Mount Carmel.



Promontory of Mount Carmel.

Next we ascended the mountain itself; and we spent two nights in the convent on its heights; so that the whole scene is well impressed on my memory. We went down the mountain-side that afternoon, to see the caves where the schools of the prophets used to be; where the young men were gathered together to learn what was known of religion, and to prepare themselves for its administration. Whether the principal cave was really thus occupied or not, some use was certainly made of it in ancient times. We found it a large square grotto; a spacious apartment in the mountain side—cool, shadowy, and solemn. All about its entrance, and over all that side of the mountain, from the beach below to the convent on the height, was a perfect jungle of hollyocks, ilex, odoriferous shrubs, herbs of many savors, and wild flowers as gay as the rainbow. Dry and drooping was all this vegetation when Elijah came hither at the end of the long drought, and cast himself down upon the earth while his servant watched on the ridge above. But oh! what an expanse of sky and of blue sea was there for the man's eye to range over while looking for a token of approaching rain! To-day there was not in all the sky a cloud so big as a man's hand; but instead of a cloud, there was, at evening, the everlasting sign of the silver bow. When the sun had sunk beneath the waters, and left a golden glow on both sea and sky, the young moon hung in the west yet a little while before the mild spring night veiled from my watching eyes "the excellency of Carmel."

POWER OF MUSIC.

It has been justly said that music had no mortal artist for its inventor; it was implanted in man's nature, as a pure and heavenly gift, by the great Creator himself. Of all the fine arts, it alone comes home to every heart. The uncultivated rustic, who would feel less pleasure in contemplating the Apollo of Belvedere, than in gazing at one of the coarse-painted plaster-of-Paris figures hawked through the streets of our cities, and would turn from one of the finest of Titian's paintings, to admire some flaring sign over a country inn, is alive to the tones of music, and can feel all his sympathies awakened by a tender or a lively air. Music is so much a part of our nature, surrounds us so completely in this vocal world of ours, that its influence begins at the cradle, and only ends at the grave; it has even been conceived to make a part of the enjoyment in a happier state of existence.

There is a sweet harmony even in inanimate nature—the measured flow of the waters, the regular rushing of the tide, the wintry gust sighing through the woods, or the summer breeze rustling the leaves, and the sweet echoes returned from rock to glen, or breathing in melting cadence along the waters—which gives the listener a feeling as if he were admitted to a communion with the unseen world.

When we consider the music of the animated world, the singing of birds, the hum of insects, the lowing of cattle, it seems reasonable to ask whether this melody is meant for the delight of man alone? Though his organs may be more delicately adapted for musical sounds, and his feelings more exquisitely alive to them, yet we may still believe that the lower creatures, participate in some degree in the enjoyment—a belief that may be more readily granted, from the innumerable instances on record, of the pleasure which music has appeared to give them. We are told that musical sounds have wonderful power over the stag, exciting complacency, if not rapture; and that his enemies frequently employ the shepherd's pipe to lure him to destruction. Mr. Playford mentions that he met a herd of stags, consisting of about twenty, on the road following a bagpipe and a violin. So long as the instruments were played, the stags went forward; when the music ceased, they stopped. In this way they travelled from Yorkshire to Hampton Court. The excitement of horses and of hounds, when they hear the hunter's horn, is well known. Stephanus states that he saw a lion leave its prey to listen to music. There is a remarkable instance of the delight which a flock of sheep and some goats took, in listening to the flute, mentioned in the life of Haydn. A party of young people were enjoying themselves one summer's day on the side of a mountain near Lake Maggiore. One of the party took out his flute and began to play. The sheep and goats, which were following each other toward the mountain, with their heads bent downward, raised them at the first sound of the flute, and all advanced in haste to the spot, from which the music proceeded. By degrees, they flocked around the musician, and listened in motionless delight. He ceased playing, but the sheep did not stir. The shepherd with his staff obliged those that were nearest to him to go on; but when the flute-player began to perform again, the flock returned to him. The shepherd became impatient, and began to pelt them with clods, to force them to move, but not one of them would stir. The shepherd enraged with them, whistled, scolded, and finally pelted them with stones. Such as were struck passed on, but those who were not, refused to stir. The

shepherd had at length to entreat the musician to cease, before he could get his flock to move; but whenever he resumed the instrument, they would stop at a distance to listen.

It is said by Goldsmith and others, that the elephant appears delighted with music, and very readily learns to beat time, to move in measure, and even to join his voice to the sound of the drum and trumpet. Not long since, an officer in the English army mentioned, that at Gibraltar, the monkeys used to come forward to listen to the military bands, and during the time of their performance, would seat themselves on a wall to listen, retiring as soon as the music was over. It is well known that there have been dogs, which evinced the greatest pleasure when they have heard music. The story of the dog at Rome, which went by the name of the Opera Dog, from his regular attendance at the opera, is well authenticated; many witnessed his raptures, and have seen him when he could not gain admittance to the theatre, stand with his ear close to the wall, to catch the sounds. Some have evidently distinguished airs, testifying more delight at some than others. Mr. Chambers states that his father had a cat, unlike many of her kind—which seem heedless of all music, but their own purring—for she evinced the most extraordinary feeling, whenever she heard the song of "Mary's Dream." It was frequently and most sweetly sung, by a gentleman, who was sometimes a guest in the house. Poor puss would listen with rapt attention till she heard, "Sweet Mary, weep no more for me!" when she became excited to an extraordinary degree, mewing most piteously. Had we believed in the transmigration of souls, we should most assuredly have thought that "sweet Mary," was again an inhabitant of this world, in the shape of a sleek tabby cat. It has been said, that even the wild antelope has been known to come out of the woods to listen to music. A party of choristers experienced surprise one evening, when they were enjoying themselves on the banks of the Mersey. As they sat upon the grass, they joined in an anthem; and after a while, as they sang, they perceived a hare come from an adjoining wood, and stop within about twenty yards of them, turning her head with evident pleasure to catch the sound of the music. When the singing ceased, the hare went back toward the wood. When she had nearly reached it, the singing was resumed. She stopped, turned round, and hurried back to the spot where she had before remained to listen: here she stayed in evident delight, as long as the music continued. When it was over, she walked slowly across the field, and disappeared in the wood. In Mexico, it is absolutely required that the swineherd should

have a musical voice, that he may sing when the pigs quarrel, which has the effect of soothing them, and lulling them to sleep at the proper time, which greatly promotes their fattening. The gushing of the wind, and all sounds, it is well known have a great effect upon these creatures. We lately observed in the streets of New York, a number of dogs, dancing correctly some of the most difficult waltzes, to the tunes played by their master. Snakes can be tamed by music: it is said that even when irritated by pain or hunger, they can be soothed by a plaintive air. Sir William Jones heard from a person, on whose veracity he could rely, that he had often seen the most venomous, and malignant snakes, leave their holes upon hearing tunes upon the flute. It is thus the Indians free the houses which are infested by snakes; the sound of the flute entices them out from their hiding-places where they lurk. It is said that when the negroes search for lizards, which they make use of for food, they attract them by whistling an air. We may almost credit the powers of the lyre of Orpheus, when we read of a gentleman confined in the Bastille, who begged the governor to permit him the use of his lute, to soften by the harmonies of his instrument, the rigors of his prison. At the end of a few days, he was greatly astonished while playing on his lute, to see peeping out of their holes great numbers of mice; and, descending from their woven habitations, crowds of spiders, which formed a circle about him, while he continued breathing his soul-subduing instrument. When he ceased to play, the assembly, who did not come down to see his person, but to hear his instrument, immediately broke up. As he had a great dislike to spiders, it was two days before he ventured to touch his instrument again. At length having, for the novelty of his company, overcome his dislike of them, he recommenced his concert, when the assembly was by far more numerous than at first. Thus is this anecdote given in the "Curiosities of Literature," and has often been reprinted. It may fairly be credited, when we recollect that bees, when flying away, will lag behind if they hear any tingling sound, and their flight, when about to swarm, can be effectually arrested by the sound of a bell, near which they will settle themselves. Bullfinches can be taught to warble an air with the most astonishing precision. Sir William Jones states on good authority, that when a celebrated lutanist was playing to a large company in a grove, near Shiraz, the nightingales were distinctly seen trying to vie with the musician; sometimes warbling on the trees, sometimes fluttering from branch to branch, as if they wished to approach the instrument; and at

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length dropping on the ground in a kind of ecstasy, from which they were soon raised by a change in the measure. If music has such charms for the lower creatures, well may its influence be great over the human race, whose sensibilities, fond associations, and tender recollections can be awakened by its witching spell? It indeed mingles itself with all our pursuits; it quiets the child in its cradle, as the nurse sings her soothing lullaby; it rouses the patriot's zeal; it stirs up the spirit to revelry, or raises it to devotion; it exhilarates intercourse, and lightens labor; sweet is the milkmaid's song as she plies her task; its cadence falls alike soothingly upon her own ear, and upon that of the cow who supplies her pail. There is in the chorus of the "yo-ho," of the sailor, as he labors in his vocation, that which makes it lighter.

Itinerant venders of goods, have set their proffered sale to regular notes, so that the different articles which they carry, are known long before the words which accompany the cadence are heard. We were much amused lately, when reading "Letters from a Gentleman in the North of Scotland, to his Friend in London," written before 1730, with an account of the manner in which music accelerated the harvest-work. He says, "When there are any number of women employed, they all keep time together, by several tones of the voice, and stoop and rise together as regularly as a rank of soldiers when they ground their arms. Sometimes they are incited to their work by the sound of a bagpipe; and by either of these things proceed with great alacrity, it being disgraceful for any one to be out of time with the sickle." They use the same means when thickening the new-woven plaiding, which is done by six or eight women, sitting upon the ground, near some river or rivulet, in two opposite ranks, with the wet cloth between them: "their petticoats are tucked up, and with their naked feet they strike one against another's, keeping exact time, as above-mentioned; and among numbers of men employed in any work that requires strength and joint labor, as the launching of a boat or the like, they must have the piper to regulate their time." Travellers, in passing through the southern states, must have often remarked the slaves lightening their labors by chanting some simple melody in concert. To keep time seems a natural propensity: why it should be so, may yet be determined by philosophers. It would be beyond our limits to point out one instance in a hundred, that we could enumerate; but in everything we hear (though it may pass without our observing it) there is a kind of measure, and this often suggests subjects to musical composers. A favorite air

imitated the yelping of dogs so exactly, that it could not be heard without the resemblance being perceived. One of the most delightful compositions was suggested by the regular strokes of the blacksmith's hammer against the anvil. Sir Charles Bell, in his admirable treatise on the hand, observes—"The divisions of the time in music in some degree depend on the muscular sense. A man will put down his staff in regulated time: and in his common walk, the sound of his steps will fall into measure. A boy striking the railing in mere wantonness, will do it with a regular succession of blows. This disposition in the muscular frame to put itself into motion, with an accordance to time, is the source of much that is pleasing in music, and assists the effect of melody. The closest connection is thus established between the employments of the sense of hearing, and the exercise of the muscular sense; the effect of disorders of the nervous system, is sometimes to show how natural certain combinations of actions are in the exercise of the muscular frame." Sir Charles Bell, illustrates this observation by a curious case of a young woman who had never been able to learn a common country-dance, yet, when under the influence of a morbid mental excitement, in association with the organs of voluntary motion, began to exercise involuntary movements not unbecoming an opera-dancer. "At one time she would pace slowly round the room, as in a minuet, with a measured step, the arms carried with elegance; at another time she would stand on the toes of one foot, and beat time with the other; on some occasions she would strike the fable, or whatever she could reach, with her hand many times, softly, and then with force. At length it was found that she did everything in rhythms. A friend thought that in her regular beating he could recognise a tune, and he began singing it. The moment this struck her ears, she turned suddenly to the man, danced directly up to him, and continued to dance until she was quite out of breath. The cure of this young woman was of a very unusual kind. A drum and fife were procured, and when a tune corresponding to the rhythms of her movements was played, in whatever part of the room she was, she would dance close up to the drum, and continue dancing until she missed the step, when these involuntary motions instantly ceased, and the paroxysm ended. The physician, profiting by this, and observing a motion in her lips, put his ear close to her mouth. He thought he could hear her sing, and questioning her, she said there was always a tune dwelling upon her mind, which at times had an irresistible influence upon her, and impelled her to begin her involuntary motions. In the end, she was cured by altering

the time in the beating of the drum; for whenever she missed the time, the motions stopped."

The nicety of perception for fine sounds in some minds is as remarkable as the extreme enjoyment they derive from them. A musical gentleman mentioned in company, that amidst all the noise of a large party, he could distinguish the faintest tinkle on a wine-glass, because it was a musical sound. Some years ago, an eminent violinist arrived in Edinburgh, and took up his lodgings in a street where all the houses were externally alike. Returning home late one evening, and having forgot the number of the house, he was at a loss to find his home, till a musical expedient occurred to him. Conceiving that he should be able to distinguish the street-door bell of his landlady's house, he deliberately went along a small portion of the street, ringing each bell, till he arrived at one of a peculiar tone, which he at once recognised as the right one, and on hearing which, he waited till he was admitted. We do not know if the hero of the subsequent anecdote was in any degree gifted as a musician; but his perception of nicety in tone seems to have been as great as that of Signor E——. It was in April, 1836, that Lieutenant Laver, on leave of absence from his regiment, spent a night in the Bush-Inn in Manchester. In the morning, as he was sitting at breakfast, a band of street musicians came past, and in one of the instruments (the serpent) he thought he recognised the peculiar style of playing of a man who had once performed on that instrument in the band of his regiment, but who had deserted. The lieutenant immediately ran down stairs, found his surmise correct, and had the man apprehended. To those entirely ungifted with music, such delicacies in this particular intellectual sense seem miraculous.

Mr. Burette, and other physicians, have believed that music affected the whole nervous system, so as not only to give temporary relief in some diseases, but to achieve radical cures in many cases. He thought that music could palliate the pains of the sciatica. He conceived that certain vibrations of the nerves, along with other effects produced, to be the cause of this; and that its power of fixing attention, and withdrawing the mind from the feelings which occupied it to different channels of thought and sensibility, awakening dormant sensations, might produce a powerful effect, that might operate on the entire frame, causing changes almost miraculous. Theophrastus asserted that diseases have either been cured by music or mitigated. We find this illustrated in Mrs. Grant's "Letters from the Mountains," when she mentions the effect which the singing of his attendants had on her little boy, in soothing his last sufferings; but,

like everything she wrote, it is so interestingly given in her own words, that it is best to transcribe the passage. "I, for my part though a stranger to the art of music, am well acquainted with its power, and subject to its influence in its rudest forms, particularly when it breathes the spirit of that sentiment which for the time predominates in my mind, or wakes some tender remembrance with which accident has connected it. When my dearest little boy was in the last stage of that illness which proved fatal to him, we had three maids who had all good voices. One was afraid to sit alone to attend my calls, on which the nursemaid agreed to sit with her, and lull the infant beside her. The solitary maid was then afraid to stay alone in her attic abode. The result was, that the three syrens sung in concert a great part of the night, which seemed to sooth the dear sufferer so much, that when they ceased, he often desired that they would begin again. He listened to it three hours before he expired. I never hear the most imperfect note of *Cro Chalin* since without feeling my heart-strings accord with it."

Sir Henry Hallford, in his essays and orations, mentions the case of a gentleman who became insane on the loss of his property, and for months was in such a state of stupefaction, that he remained perfectly motionless, not moving unless when pushed; nor would he speak to or notice any person. Music in the street at length produced its effect. He was observed to listen, and to be still more awakened to its power the second time he heard it. The person under whose care he was, availed himself of this happy omen, and offered him a violin. He seized it eagerly, and constantly amused himself with it. The result was most fortunate: in two months he was dismissed cured. Sir Henry alludes distantly, but affectingly, to the case of George III., who had been his patient, and bears testimony to the power which music had over his mind, mitigating the sadness of seclusion. And we have heard a most touching account of the venerable king: sightless and secluded, a prey to visionary delusions, yet finding a sweet solace for his troubled mind in "the touches of sweet harmony." There, at his instrument, he might often be seen, wrapt in thought, as the strings responded to his touch in the sacred strains of Handel.

One of the most remarkable instances of the efficacy of music occurred during the celebrated Farinelli's visit to Spain. The queen determined to try the effect of his astonishing powers on the king, who had had a passion for music. He was then laboring under such a dejection of spirits, as baffled all medical treatment, and disappointed every effort made

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to divert his thoughts. Neither pleasure nor business could rouse him from the hopeless melancholy under which he labored. Utterly incapable of managing public affairs, or of enjoying domestic intercourse, he remained in a state of the most deplorable sadness and apathy. Farinelli was placed in a room adjoining that where the king sat; he sang some of his pathetic songs with all the captivating expression for which he was so remarkable. The queen anxiously watched the effect; nor was she disappointed. The king seemed surprised; and as he listened, he became affected, and tears forced their way, and the pent-up feelings gushed forth once more. Another song, and he ordered the attendance of the singer. Farinelli appeared; the king gave utterance to his delight and admiration, and desired him to say how he should reward him for the gratification which his wonderful talents had given. Farinelli, who had been directed how to act, only entreated that his majesty would permit his attendants to dress him, and that he would appear in council as usual. The king complied; his spirits returned; and thus Farinelli effected a cure in some moments which the ablest medical men in Spain, all the devoted courtiers, and the anxious family, had in vain endeavored to bring about. This affecting anecdote naturally reminds us of the playing of David before Saul, when the evil spirit departed from the king, and he was well. To this very remarkable case the beautiful lines of Cumberland, now almost forgotten, but worthy of being remembered, are appropriate. The last stanza runs thus:—

"The turbid passions shall retire
Before the minstrel's art,
And the same hand that sweeps the lyre
Shall heal the stricken heart."

As to Farinelli, he rose to the highest favor at court; and, to his great credit, instead of being elated by an elevation so exciting to one of humble birth, he preserved a humility and simplicity which endeared him to the Spanish nobility, and won from them their esteem and confidence. The various anecdotes recounted of this gifted man, reflect as much honor on his disposition and character as they do on the genius that so eminently distinguished him. There was such enchantment in his singing, that it completely overcame Senesino, who was himself one of the finest singers. He and Farinelli had long wished to hear each other sing; the opportunity was at length afforded, and they were engaged to perform at the same theatre. Senesino played the part of an inexorable tyrant, and Farinelli of his unhappy captive. When he appeared in chains, he sang with such exquisite pathos, that Senesino forgot the cruel part he had to sustain; he forgot everything; and, throwing himself into

Farinelli's arms, he burst into tears. But this need not surprise us, when we recollect that two hired assassins, who, it may be presumed, were not possessed of very tender feelings, when they waited to fulfil their engagement to murder Stradella, near the door of a church in Rome, where he was taking part in an oratorio, were so completely overcome by his pathetic music, that they not only abandoned their purpose, but confessed it to him, and warned him of his danger. The complete mastery which music often exerts over the mind may be considered its greatest triumph. I need only allude to the *Ranz des Vaches* of the Swiss, the *Marsellaise* of the French, the *Lochaber* no more of the Scotch regiments, and *Hail Columbia* of the Americans. Its influence over the affections may be illustrated by an anecdote connected with a custom which is observed among the Greeks. The young Greek often leaves his home for a foreign land, but never without grief. Fondly attached to the place of his birth, and to his domestic ties, he feels himself an exile wherever he goes, and endures the greatest anxiety on account of those near and dear to him that he has left, and is often haunted with a sad foreboding that he is to meet them no more. When he is about to take his leave, there is a farewell repast, to which the relations and the friends are invited; when it is over, all the guests accompany the traveller some miles on his journey. During this, and at the repast, it is the custom to sing farewell songs; many of these have been long in use, but some are composed specially for the occasion; and it not unfrequently happens that they are composed extempore by some one dearest to him, or by himself. There was such a meeting held one day near Pindus, on the occasion of the youngest of three sons of respectable parents devoting himself to voluntary exile. The deepest regret which he felt in leaving the home of his childhood, was the consciousness that he carried with him no share of the affections of a mother on whom he doted. She, unlike the generality of Greek mothers, had never marked him as an object of her love, but had treated him with a coldness painfully contrasted with her conduct toward her other children; this he had borne without a murmur, but now that he was about to leave her, perhaps for ever, his heart was breaking. The spot chosen for the parting was a wild and desolate scene, among high and rugged rocks. Several of the mournful songs had already been sung, when the young traveller, separating from his company, ascended a rock which overhung the path; here he sang his last sad farewell in tones that sank into every heart, and drew tears from every eye. He expressed, with the deepest pathos, the passionate

grief which he felt in quitting his home and those he loved; but his greatest anguish was in thinking he was going without his mother's affection. The heart of the mother was touched; her emotion increased with every word and every note of the pathetic air to which he sang; the warm current of affection gushed from its hidden springs; she clasped him in her arms, and weeping and kissing him over and over again, she entreated forgiveness, and promised to love and cherish him as long as she lived. The promise was inviolably and tenderly kept.

The most simple music, or that which is hardly music at all, often finds its way to the very heart. It is said that Curran attributed his first impressions of eloquence and poetry to the wild chant of the Irish cry, or funeral dirge. The memory of some of those strains, which have been often described as something unearthly, and resembling the melody of an Æolian harp, no doubt flitted across his mind, as he has sat preparing himself for the defence of some client's life, as was his wont, with his violin in his hand, from which ever and anon he drew forth wild and plaintive sounds. It is customary with the improvisatori to sweep the chords of an instrument as they compose their verses, to aid their conceptions. Even the music of bells produces a powerful effect. Who does not feel his spirit lighten as he hears the merry chime of festive bells? Who does not feel a touch of awe as the death-bell tolls? The inhabitants of Limerick are proud of their cathedral bells; and well they may, for they are passing sweet. They boast that they were brought from Italy, and tell of their having occupied the skill of a clever young artist for some years. By the time he had manufactured them, their chime had taken such possession of his heart, that he resolved never to leave them; so that when he sold them to the prior of a convent, he removed to their neighborhood, that he might still hear their music: he hoped that they would toll his requiem. Troubles came—he lost his property—the convent was laid waste—the bells were taken away—and this grieved the artist more than any of his losses; he wandered over many of the countries of Europe, hoping to reach the spot where his bells might be. Years after they had been manufactured, it happened that, toward the close of spring, on a lovely evening, a vessel had anchored at some distance from Limerick, and a boat was seen to glide from its side along the Shannon. It had been hired by one of the passengers—the Italian artist—now grown old and gray. He was impatient to reach the city, to which he had traced his much-loved bells. As they rowed along the smooth waters, the steeple of the cathedral appeared in the distance above

the surrounding buildings; the boatmen pointed it out to the stranger, as he sat in the stern; he fixed his eyes earnestly and fondly upon it. The boat glided on; but all at once, through the stillness of the hour, the peal from the sweet cathedral bells burst upon the air; the stranger crossed his arms upon his breast and leant back. The shore was reached; the face of the Italian was still turned toward the cathedral, but the spirit had fled, and the bells had tolled his requiem!

SLAVERY IN RUSSIA.

THERE are forty millions of serfs in Great Russia, the largest slave population in the world. Forty millions of men—glebni adscripti—attached to the soil, bought and sold with the soil, on which they are born, and on which they die. Upward of twenty millions of these serfs belong to the crown, the remainder to the nobles. Previous to the sixteenth century, the peasantry of Great Russia, retained the privilege of moving from place to place, held the free disposal of their persons, and sold their services for a term of years. In 1598, when Boris Gedenof ascended the throne, and sought the support of the nobles, he made a law by which the peasant was bound to the soil, and became the property of the noble.

The value of an estate in Weliki Russia, depends more upon the number of its peasants than its acres. Some occupy a vast extent of country, and contain as many as one hundred thousand souls. The proprietor pays an annual tax of about one dollar and sixty cents upon every serf. The condition of the latter, varies according to the circumstances and disposition of the master. As a general rule, he has a house and a piece of ground, and the privilege of feeding a cow upon the common near the village. For these he pays with his labor. The steward of the lord assigns him a daily task, which is easily accomplished before noon. The remaining hours are at his own disposal, except in harvest, and certain other times, when he and his wife must turn out into the field. He can not leave the estate, or learn a trade without permission. The master must maintain him, furnish him with food and medicine when it is necessary, and is liable to a fine, if he is found destitute or begging upon the highway. Stray serfs, runaways, or peasants, whether free or bound, roaming without a passport, are detained and advertised; and, if not reclaimed, or relieved by the owner or some responsible person, are sold at public sale. The proprietor can not

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oblige the serf to marry contrary to his incli-
nation; and, on the other hand, the clergy
can not marry him without the permission of
the master. The serf can not be sold off the
estate, or separated from his family, and many
other humane provisions have been made for
his happiness and safety.

But it is futile to speak of rules and regula-
tions in a country where wealth and birth,
give despotic power. The proprietor is gov-
erned in his action entirely by his interest, and
he treats his peasants precisely as he pleases.
He sells them whenever a good price is of-
fered, and he sends them wherever it suits his
convenience. He makes them weave or
plough; he hires them out by the month or
year, just as it pleases him to do. In the
same way, he may treat them with kindness
or with blows; but as they are generally re-
garded as insensible and ungrateful, they get
more kicks than favors. The serf can not
accuse the master. If the blows of the lat-
ter cause death within three days he is fined;
but if the serf lives more than three days
after severe punishment, the master is not li-
able. If the serf is killed without premedita-
tion, by any other than the master, the killer
pays the master three hundred and eight dol-
lars. If he is killed with premeditation, there
is no indemnification for the master, and the
murderer is responsible to the police.

That the Russian serfs are often sold with-
out the lands on which they dwell, is truly
stated by Mr. Maxwell, but we believe he is
mistaken in saying that they can not be sold
by law. The imperial council has once for-
mally determined that such sales are legal.

In the subjoined passage, the reader will
notice several remarkable resemblances be-
tween the Russian serf, and the negro slave:—

"The *posadki*, or freedman, can not hold
lands or serfs; but they have other privileges,
and in the distant provinces display, as we
have mentioned, all the natural vigor of the
race, and are distinguished for industry, and
the most indefatigable perseverance in the
pursuit of gain. But the serf has not the
same inducements, and exhibits none of the
activity and industry so remarkable in the
posadki. He is the creature of apathy, and
all the stirring qualities of his nature are latent
and undeveloped. He works as he is directed,
and manifests the same rude ability in any
employment he may follow.

"He is ordered to be a musician, mechanic,
or a manufacturer, and becomes either of these
with astonishing facility, though he excels in
none. Neither the fear of the lash, nor the
promise of reward, can force him to work with
the plane or saw; but with the hatchet, which
he always carries at his girdle, he will hew
the forest trees, prepare his logs and plank,

build a house, and make his furniture. He
never exerts his full strength. If the burden
is a heavy one, he calls for assistance. It is
a common thing to see a hundred men holding
to a rope, and hauling a stone or a piece of
timber, that would have been handled with
ease, by twelve or twenty Englishmen. On
such occasions, before the united effort is
made, the Russian workmen sing for some
minutes in chorus, and the end of the song is
the signal for the pull altogether. After two
or three pulls they stop, and the singing begins
again, and so on to the completion of the
work—more than half the time at least being
passed in these musical interludes. The task
is therefore often a light one, and easily per-
formed. When it is finished, the laborer is
at liberty to employ himself as he pleases.
Should he do double duty, however, he would
not be rewarded, and instances are known,
within the observation of the writer, where
the offer of the peasant to perform an extra
task had been rejected, and for the reason, that
any such proceeding was unusual, and calcu-
lated to produce confusion. So the serf, leav-
ing his wife to cultivate his garden and tend
the loom, loiters away the balance of the day
in indolence."

The disinclination of the serf to hard work,
his apathy under chastisement, the necessity
of employing half a dozen to do the work of
one, the lightness of his tasks, and his prac-
tice of singing when several work in company,
are circumstances in which he resembles the
African slave, as seen in the southern states,
and in the West Indies. Mr. Maxwell points
out some other resemblances—such as the fre-
quency of great longevity among the serfs,
and the extraordinary multiplication of the
race. Every year another million is added to
the population of the Russian empire.

SWITZERLAND.

SWITZERLAND is reputed to be the *freest*
country in Europe. This is an error, arising
most likely from the common notion that the
country is a confederacy of republics, which
wrested its freedom from surrounding despo-
tisms. It is one thing to throw off a foreign
yoke, and another to establish internal free-
dom. Switzerland at the present day, with
all its wonderful industry and spirit of liberal-
ity in matters of international trade, is, in
point of fact, a cluster of little despotisms, the
despots in each case being a majority of the
population which oppresses the minority—op-
pression on the score of religion and of birth.
Ignorance, and selfishness—which is only a

manifestation of ignorance—are conjointly the cause of this discreditable state of affairs. Under the common name of Swiss, three great European races meet and nestle about the heart of the Alps—the French from the west, the German from the north and east, and the Italian from the south; and the want of communication, till of late years, has kept these races apart and ignorant of each other. Nowhere, also, is the distinction of religion more marked. Two-thirds of the Swiss are protestants, and the remaining one third catholics; and the protestants and catholic cantons, as the recent civil war has shown, hate each other as the hostile clans in the highlands hated each other two hundred years ago. Besides, though Switzerland, compared with most countries, is a land of mountains, the great part of it is composed of plains amidst the stupendous Alps. Two hours' stiff climbing suffices to change from the neat-trimmed flower-garden and stuccoed cottage of the industrious artisan of Zurich, into the lofty hill-country of Schweitz, where the mountaineer leads a half-vagabond existence, tending his numerous goats among storms and mist, while his children run ragged and barefooted along the road, begging from travellers. Between people so variously situated there can be little sympathy.

A consequence of this national disintegration has been, that the rights of citizenship possessed in one canton have always been good for nothing in another. The citizen of Geneva, who was driven to settle in the Valais, was allowed toleration; but neither he nor his posterity could, by any length of residence, become denizens of their adopted country. A Roman catholic at Lucerne who turned protestant, lost all his property, and was liable to banishment; a protestant at Berne turning Roman catholic, was punished in like manner. Several of the present cantons continued, up to the time of the French revolution, to be vassals to the larger ones. Thus the canton of Berne was sovereign lord of the present cantons of Vaud, Uri, and Tessin, which it crushed with taxation, without admitting its subjects to any political rights whatever. Thus, in process of time, it came to pass that all over Switzerland there grew up a distinct body of men, the descendants of individuals who had lost their civil rights in their respective cantons, either in consequence of change of religion, or of misdemeanors for which they were sentenced to banishment, or of illegal marriages, or lastly, as foreigners settled in Switzerland. The stigma thus cast upon the fathers descended upon the children to the last generation. They formed a separate class called *Heimathlosen*—literally, the homeless—people to whom the law allowed nothing—involuntary outlaws. They exist at the pres-

ent moment in steadily-increasing numbers; and as injustice always reacts on itself, the parties so degraded form an organized body of mendicants, hucksters, pilferers, and often robbers, like the gipsies of other countries, but much more numerous, compact, and formidable to the society, which has cast them out.

Some years ago, these *Heimathlosen* were become so troublesome, that their state was forced upon the attention of the Swiss diet, which instituted inquiries accordingly, the result of which is now before us. The report stated the *Heimathlosen* to amount to many thousands in number in all the central cantons, from the lake of Geneva to the Grisons, beginning at the Hanenstein in canton Soleure on the west, and extending on the east beyond the Rhine into the Austrian principality of Lichtenstein. None of these thousands had any fixed trade, or were allowed by the law to possess a permanent house or lodging. When they ventured into the towns, they assumed, for the time, the characters of thread-twisters, match-sellers, bird-catchers, and menders of pots and kettles. Whenever they might they lived by choice in the woods and mountains, supporting themselves by all kinds of thievery. At night, they creep into caves, or sleep round a fire in the open air; and this through the depths of winter. Marriage is unknown among them; none of those examined could tell their own age, and very few knew who were their fathers and mothers. As soon as the children can walk, they are sent into the towns to beg and steal, and bring their plunder at night to the elder vagrants, who remain meantime encamped in the forests. They have still a voluntary government, and their leader at this time was a noted housebreaker named Krusikans, subsequently executed. Wherever and whenever discovered, they are liable to be imprisoned without cause assigned; and formerly, when the prisons were overcrowded, many were executed without even the formality of a trial. They are now, as soon as seized, escorted by troops to the boundaries of the canton, and thrust into the next, by which they are expelled in like manner, unless they can meantime escape. The report recommended various plans for absorbing this unwholesome population, which have been frequently since discussed; but nothing has been done, and the troubled state of the country renders any improvement now less likely than ever.

Vaud was a few years ago the scene of some enormities on the score of religion, and while we now write, intelligence has been received that the council of state of that canton, which is presbyterian, has enacted that all religious meetings of parties, not in connexion with the authorized church, are illegal; public worship of all such bodies is according-

rapidly-increasing numbers; always reacts on itself, they form an organized body of robbers, pilferers, and often of other countries, but they are compact, and formidable, which has cast them out.

These Heimathlosen were some, that their state was the invention of the Swiss diet, and inquiries accordingly, the report before us. The report is closed to amount to many in all the central cantons, Geneva to the Grisons, Baselstein in canton Solothurn, extending on the east beyond the Austrian principality of Tyrol, of these thousands had any allowed by the law to possess or lodging. When they roamed, they assumed, for the most part, the guise of thread-twisters, match-makers, and menders of pots and pans; and they might they lived in the woods and mountains, supplied by all kinds of thievery. They went into caves, or sleep round the ruins of castles; and this through the arrangement is unknown among the authorities, who examined could tell their names, few knew who were their parents.

As soon as the children were sent into the towns to beg, they began their plunder at night to those who remain meantime engaged. They have still a leader, and their leader at the head of a band of armed housebreaker named the 'Häuptling'. Wherever discovered, they are liable to punishment without cause assigned; and the prisons were overcrowded, without even the formalities now, as soon as seized, they are sent to the boundaries of the canton, to the next, by which they are sent in the same manner, unless they can be sent back. The report recommended the suppression of this unwholesome trade, which have been frequently since the suppression has been done, and the country renders any such bodies is according-

View of Zurich, Switzerland.



ly put down by military force, and ministers are in danger of their lives. A more startling instance of the tyranny of a majority over a minority could scarcely be found in modern times.

Our illustration presents a panoramic view of Zurich, the most important manufacturing town of Switzerland, the capital of the Canton of that name, which has taken the federal or protestant side in the recent struggle.

The town lies at the north end of the lake of Zurich, and on the banks of the Limmat. It is the seat of the Swiss diet, alternately with Berne and Lucerne, for a period of two years together.

The banks of the lake and river, and all the neighboring hills, are thickly dotted with houses, now united with the town itself by the removal of the useless and inconvenient ramparts, and forming a wide circle of suburbs.

There is little worthy of note in the public buildings of Zurich. Its most pleasing features are its promenades; the best of which commands a delightful view of the town, lake, and distant Alps.

Zurich is historically remarkable as the place where the reformation first commenced in Switzerland, in 1519. It has also been the asylum of many eminent English protestants; and here was printed, in 1535, the first entire English version of the Bible, by Miles Coverdale.

COURTSHIP.

WE have seen how little there is deserving the name of courtship in savage life, of either the present or the past. It is only amid the refinements of enlightened nations, that the delights of making love are of common enjoyment. In Asia, in Africa, and in much of Europe, marriage is preceded by none of those delicate attentions, and affectionate interchange of sentiments, which form the proper prelude to the matrimonial engagement. Even in the politest nations, as among the most barbarous, the marriages are affairs of convenience, in which fortune, position, everything is consulted, but the sentiments of those who are taught to submit in a matter of such vital moment, to parental dictation. Thus in France, as in Java, young persons meet for the first time in their lives, to be indissolubly united by the marriage tie.

Spain was long the land of gallantry and chivalry. After the ancient customs of confining women with bolts, bars, and duennas, had giving way, a romantic gallantry was carried to the highest pitch, and love became the brightest picture of Spanish life.

Though women have long since been permitted to have a choice in affairs of the heart, there was still preserved a decorum of manners, which prevented a Spanish lady from being alone with her lover. The consequence is a resort to every ingenious device, by which a glowing passion may find expression.

The Spanish lover writes out his adoration in sonnets, and sets his affection to music. At night he sings his love-lays under the lattice of his lady. Or if not himself gifted with musical abilities, he hires artists who are able to do justice to the ardor of his passion. The colder the air without, the more is the serenade supposed to warm the heart of the lady within, and as pity is supposed to lead directly to love, the Spanish suitor stays night after night, heaving deep sighs, and casting piteous looks toward the window, satisfied, yes, supremely blessed, if he receives the slightest signal of acknowledgment in return.

In Spain love is full of sentiment—a delicious madness, which, for the time absorbs all other feelings. A Spanish lover scarcely thinks, speaks, or dreams of any but his mistress. Not only does his devotion to her appear like idolatry, but he is ready to encounter any peril, or to engage in any combat, to manifest the strength of his attachment. He is ready to punish her enemies, fight his rivals, or do battle with the world at large, in his sweet mistress's cause; but his choicest opportunity for signalizing his courage and conduct, under the very eyes of his mistress is in the bull-fight, the national festival of Spain, and all Spanish countries. There, surrounded by the whole public, and sure that his mistress is watching him, as Hudibras has it:—

—“He obtains the noblest spouse,
Who widows greatest herds of cows.”

This notion of exciting love by bringing into play the emotion of pity, or sympathy, has been made use of in Spain, in a still more remarkable manner.

It was once the custom in Madrid, and other chief cities of Spain, for large companies of people, who called themselves disciplants or whippers, to form a procession through the public streets, every good Friday, attended by the religious orders, courts of law, and sometimes by the royal court. The whippers were arrayed in high sugar-loaf hats, white gloves and shoes, and waistcoats with ribands of the colors preferred by the mistresses of their affections, and were armed with whips of small cords to the ends of which were fastened bits of wax, in which were inserted pieces of glass. The whole city, and especially the ladies, were spectators of this procession, and as it passed along, he who whipped himself hardest felt sure of winning the favor of his

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dulcinea. When they passed a beautiful
 woman, some one was sure to whip himself in
 such a manner as to sprinkle her with his
 blood, an honor for which she returned suit-
 able acknowledgments; and when any lover
 of this train passed the window where his
 mistress was sitting, he began to lay on the
 whip with redoubled fury; while the lady felt
 complimented by such proofs of devotion.

The lively Lady Montague gives an ac-
 count of a somewhat similar scene, she wit-
 nessed in Constantinople—a procession, when
 the sultan was going out to take command of
 the army.

"The roar of the procession," says Lady
 Mary, "was composed of volunteers, who
 came to beg of the sultan the honor of dying
 in his service; they were all naked to the
 middle, some had their arms pierced through
 with arrows left sticking in them, others had
 them sticking in their heads, with the blood
 trickling down their faces; some slashed their
 arms with sharp knives, making the blood
 spring out upon the bystanders, and this is
 looked on as an expression of their zeal for
 glory. And I am told that some make use of
 it to advance their love; and when they come
 near the window where their mistress stands,
 all the women being veiled to see this specta-
 cle, they stick another arrow for her sake,
 who gives some sign of approbation and en-
 couragement to this kind of gallantry."

In England and Scotland there were former-
 ly customs less barbarous perhaps, but scarce-
 ly less objectionable—that for example of
 drinking toasts to all the beauties admired by
 the members of a convivial party, when she,
 whose lover drank the most, was the reigning
 toast. These, however, are the eccentricities
 of the tender passion.

Courtship in Italy, as in Spain, has much
 of the romance of a deep passion, and it is
 often protracted to a great length, that its
 pleasures may be enjoyed the longer.

TYRE.

BUT we linger too long on the east of the
 Jordan. Now we cross that celebrated stream.
 Our course lies due west, having on our right
 the cedar forests and the snowy peaks of Leb-
 anon, and on our left the green swellings of
 the Upper Galilee. Now we have gained the
 brow of an eminence which overlooks the
 Mediterranean; we have been too late by sev-
 eral centuries in arriving here; otherwise we
 should have seen a sight, as the saying is,
 worth seeing. From this height we should
 have looked down upon the walls, the palace

roofs, the warehouses, the workshops, and the
 spacious harbors of Tyre. Here we should
 have been greeted by the city's hum, the rat-
 tle of the chariot wheel, and the anvil of the
 artisan; and here we should have seen the
 seas, to their utmost verge, whitened by the
 sails of her ships—some voyaging westward,
 others returning with the merchandise of
 distant lands. But no one who looks hence
 at this day, and surveys the silent shore and
 the solitary seas beneath him, could imagine
 that such a sight as we have now described
 could ever have been here beheld.

With Ezekiel's magnificent prediction of
 the ruin of Tyre we are all acquainted—we
 shall give Volney's version of the passage:
 not because he has succeeded in transfusing
 more of the spirit and sublimity of the prophet
 into his translation than our translators have
 done in theirs—he falls, we apprehend, far
 beneath them; but because he has substituted
 the modern names of places for the old He-
 brew ones, and has thus thrown great light on
 the commerce of Tyre—a commerce which
 more nearly resembles that which Britain is
 carrying on at this day, than anything else of
 the kind which the world has ever seen:—

"Proud city, that art situate at the entry
 of the sea! Tyre, who hast said, my borders
 are in the midst of the seas; attend to the
 judgments pronounced against thee! Thou
 hast extended thy commerce to [distant]
 islands, among the inhabitants of [unknown]
 coasts. Thou makest ships of fir-trees of
 Sanir [the highest summit of Lebanon]; the
 cedars of Lebanon are masts to thee; the pop-
 lars of Bisan, oars. Thy sailors are seated
 upon the box-wood of Cyprus, inlaid with
 ivory. Thy sails and streamers are woven
 with fine flax from Egypt; thy garments are
 dyed with blue and purple of Hellas [the
 Archipelago]. Sidon and Arvad send their
 rowers to thee; Djabel [Djebila] her skilful
 shipbuilders; thy mathematicians and thy
 sages guide thy barks; all the ships of the
 sea are employed in thy commerce. The
 Persian, the Lydian, and Egyptian, receive
 thy wages: thy walls are hung round with
 their bucklers and their cuirasses. The sons
 of Arvad line thy parapets; and thy towers,
 guarded by the Djimedans [a Phœnician
 people], glitter with their brilliant quivers.
 Every country desires to trade with thee.
 Tarsus sends to thy markets iron, tin, and
 lead. Yonia, the country of the Mosques and
 Teblis, supply thee with slaves and brazen
 vessels. Armenia sends thee mules, horses,
 and horsemen. The Arab of Dedan [between
 Aleppo and Damascus] conveys thy merchan-
 dise. Many isles exchange with thee ivory
 and ebony. The Armenian [the Syrian]
 brings thee rubies, purple, embroidered work,

fine linen, coral, and agate. The children of Israel and Judah sell thee cheese, balm, myrrh, raisins, and oil; and Damascus furnishes thee wine of Halboun [perhaps Halab, where there are still vines], and fine wool. The Arabs of Oman offer to thy merchants polished iron, cinnamon, and the aromatic reed; and the Arabians of Dedan bring thee rich carpets. The inhabitants of the Desert, and the sheiks of Kedar, exchange their lambs and their goats for thy valuable merchandise. The Arabs of Saba and Rama [in the Yemen] enrich thee with aromatics, precious stones, and gold. The inhabitants of Haram, of Kalana [in Mesopotamia], and of Adana [near to Tarsus], the factors of the Arabs of Sheba [near the Dedan], the Assyrians, and the Chaldeans, trade also with thee, and sell thee shawls, garments artfully embroidered, silver, masts, cordage, and cedars; yea, the boasted vessels of Tarsus are in thy pay. O Tyre! elated with the greatness of thy glory, and the immensity of thy riches, the waves of the sea shall rise up against thee, and the tempest plunge thee to the bottom of the waters. Then shall thy wealth be swallowed up with thee; and with thee in one day shall perish thy commerce, thy merchants and correspondents, thy sailors, pilots, artists, and soldiers, and the numberless people who dwell within thy walls. Thy rowers shall desert thy vessels. Thy pilots shall sit upon the shore, looking mournfully toward the land. The nations whom thou enrichest, the kings whom thou didst gratify with the abundance of thy merchandise, trembling at thy ruin, shall cry bitterly in despair; they shall cut off their hair; they shall cast ashes on their heads; they shall roll in the dust, and lament over thee, saying, what city shall equal Tyre, that queen of the sea!"

Now we are in circumstances to feel how completely the prediction has been verified. Look down, then. You see this little clump of miserable houses immediately beneath, all huddled together on this low island, which scarcely rises above the surface of the water. This is all that remains of the crowning city. You see that basin for ships on the north, well-nigh choked up with sand. There the fleets of the world were wont to cast anchor. A stranger from a far-distant land passed this way not many years ago. He tells, that when he passed by, there was only a single fishing-boat in the harbor of Tyre. On the sandy plain which you perceive running up on the north of the town stood old Tyre. The army of Nebuchadnezzar lay thirteen years on that plain. Every head was made bald—every shoulder was peeled in the siege; but at last the city was taken.

Before the banners of the Chaldean army

were seen on the plain before Tyre, and even before Nebuchadnezzar had projected the expedition, with what beauty had the prophet described the result of the siege? "Thus saith the Lord; behold I will bring upon Tyrus Nebuchadnezzar king of Babylon, a king of kings, from the north, with horses, and with chariots, and with horsemen, and companies, and much people. He shall make a fort against thee, and cast a mount against thee, and lift up a buckler against thee, and he shall set engines of war against thy walls, and with his axes he shall break down thy towers. By reason of the abundance of his horses their dust shall cover thee; thy walls shall shake at the noise of the horsemen, and of the wheels, and of the chariots, when he shall enter into thy gates, as men enter into a city wherein is made a breach. And I will cause the noise of thy songs to cease; and the sound of thy harps shall be no more heard."

Old Tyre was now in ruin. The inhabitants had fled to a little island a very short distance from the shore. There they proceeded to erect a new city which became the heir of the fame and the vast commerce of that which Nebuchadnezzar had destroyed. New Tyre continued to flourish till the times of Alexander; but, as she stood in the way of the scheme of universal conquest which that monarch had formed, her reduction was necessary. In order to bring his engines of war close up to her walls, he found it necessary to construct a mound between the shore and the island on which the city stood. For this purpose he chose the materials which the place most readily offered. These were the dust, the timber, and the stones of Old Tyre, which had lain here since the period of her destruction by Nebuchadnezzar: "*They shall lay thy stones and thy timber and thy dust in the midst of the water.*" "*I will also scrape her dust from her.*" The arms of the conqueror prevailed, and the queen of the seas sank. She was soon rebuilt; but to suffer new calamities, and to come, in the course of ages, into the miserable state in which we now find her. "When you come to it," says Maundrell, "you find no similitude of that glory for which it was so renowned in ancient times, and which the prophet Ezekiel describes. On the north side of it, it has an old Turkish ungarrisoned castle; besides which you see nothing here but a mere Babel of broken walls, pillars, vaults, &c., there being not so much as one entire house left. Its present inhabitants are only a few poor wretches, harboring themselves in the vaults, and subsisting chiefly upon fishing."

Before we quit the eminence where we now stand, and from which we look down on the shadow of Tyre, let us observe how God has

the plain before Tyre, and even Nebuchadnezzar had projected the ex- what beauty had the prophet result of the siege? "Thus d; behold I will bring upon adnezzar king of Babylon, a from the north, with horses, riots, and with horsemen, and much people. He shall make thee, and cast a mount against up a buckler against thee, and gines of war against thy walls, axes he shall break down thy reason of the abundance of his at shall cover thee; thy walls the noise of the horsemen, and and of the chariots, when he to thy gates, as men enter into is made a breach. And I will of thy songs to cease; and the arps shall be no more heard." as now in ruin. The inhabit- to a little island a very short the shore. There they pro- a new city which became the me and the vast commerce of ebuchadnezzar had destroyed, continued to flourish till the times but, as she stood in the way of universal conquest which had formed, her reduction was order to bring his engines of o her walls, he found it neces- sary to build a mound between the shore on which the city stood. For he chose the materials which the readily offered. These were the er, and the stones of Old Tyre, in here since the period of her Nebuchadnezzar: "They shall and thy timber and thy dust in the water." "I will also scrape her." The arms of the con- ed, and the queen of the seas as soon rebuilt; but to suffer a, and to come, in the course of miserable state in which we "When you come to it," says you find no similitude of that h it was so renowned in ancient which the prophet Ezekiel de- the north side of it, it has an oldarrisoned castle; besides which ing here but a mere Babel of pillars, vaults, &c., there being as one entire house left. Its tants are only a few poor wretch- themselves in the vaults, and effy upon fishing."

quit the eminence where we now om which we look down on the yre, let us observe how God has

here inflicted his threatnings to the very letter. Here is the site of Old Tyre, a sandy plain with the waves tumbling over it: "*When I shall bring up the deep upon thee, and great waters shall cover thee; I will make thee a terror, and thou shalt be no more: though thou be sought for, yet shalt thou never be found again, saith the Lord God.*" Adjoining the peninsula on which the miserable village beneath us is seated, you perceive what you take to be dark rocks rising out of the waves; these are very convenient for the fishermen, who here spread their nets in order to be dried. These are not rocks; they are the stones of Tyre tumbled into the sea by her successive destroyers: "*I will make thee like the top of a rock; thou shalt be a place to spread nets upon.*" Who now remembers this great city whose fall resounded over the seas, and caused this song of lamentation to be heard among its isles—a song which the prophet had prepared beforehand, and taught the kings and cities of the earth to sing, when the mournful event should have come? We quote part of this hymn of lamentation and depart: "Thus saith the Lord God to Tyrus; shall not the isles shake at the sound of thy fall? Then all the princes of the sea shall come down from their thrones, and lay away their robes, and put off their brodered garments: they shall sit upon the ground, and shall tremble at every moment, and be astonished at thee. And they shall take up a lamentation for thee, and say to thee, how art thou destroyed, that wast inhabited of sea-faring men, the renowned city, which wast strong in the sea, she and her inhabitants, which cause their terror to be on all that haunt it."

MEXICO.

Mexico extends from about latitude sixteen to forty-two degrees north, from the gulf of Mexico to the Pacific: and was in extent, before the loss of Texas, about as large as the United States. It embraces all the climates of the world, and rises in temperature from the tropical plains of Vera Cruz and Acapulco, to the regions of perpetual snow. The Rocky Mountains, which separate us from Oregon, extend through all Mexico, and her whole surface is composed of table-lands and mountains, which rise in steps from the gulf and the Rio Grande, to the highest level, and then descend in regular gradations once more to the Pacific. She has no navigable streams, and the mountains and the arid plains compose, I should think, seven eighths of the whole territory. It is now three hundred years since

the Spanish conquest, and her population has long since reached that barrier, where nature imposes eternal obstacles to further progress, where the whole products of the earth are economically consumed by the people. No doubt, a better mode of agriculture would increase her population; but at present, to use the language of Malthus, she has reached the point of subsistence. It is true, that the remote provinces of California and New Mexico, and those bordering upon the Rio Grande, and subject to Indian invasions, contain some uncultivated lands; but the proposition, as above stated, applies to the mass of Mexico. For in the greater portion of the whole republic, women and children may be seen picking up grains of corn in the highways, and the rinds of fruit thrown in the streets, are immediately seized and consumed. So soon as you cross the Rio Grande, you feel yourself in a foreign land. Mexico has no forests. It is true, that along the streams and on mountain-tops there are trees, but you are struck with this great characteristic, that the land is bare of trees. The numerous varieties of the cactus of all sizes, intermixed with palmetto, stunted or long grass, cover the whole land. You are among a people of a novel color, and a strange language. The very birds and beasts, and dogs, seem different. The partridge, the lark, the crow, the black-bird, differ in size, and plumage, and sing differently from ours. The buildings are of Moorish and Spanish style. The goat and the sheep feed together. The bricks are of clay and straw, sun-dried. The women go with earthen vessels to the well, just as Rachel was sent of old in the time of the patriarchs of Judea. The roofs of the houses are flat, and are places of recreation; and the people wear sandals as in the East, in olden time. Wheat, Indian corn, and herds of cattle, sheep and goats, the banana and red-pepper, and garlic and onions, are the principal sources of subsistence. The products of the mines, are the principal articles of foreign exchange, added to woods, besides tallow and cochineal.

The extreme dryness of Mexico, makes irrigation necessary in most of the country, and the scarcity of water, and the habits of the people, collect the inhabitants into cities or villages. The land itself is owned by a few large proprietors, not the least of whom are the priests. The great mass of the people are serfs, with but few more rights than the American slaves. It is true, that the children of serfs, are not of necessity also serfs, but debts brings slavery, and the wages allowed by law, almost always perpetuate it. Here then is the secret of the success of our arms. I conversed freely with the tenantry and soldiers in all Mexico, and where they are

not filled with religious enthusiasm against us, they care not who rules them, American or Mexican masters. If all the Mexican soldiers were freeholders and freemen, not one of all the American army could escape from her borders. The soldiers are caught up in the haciendas, and the streets of the towns, by force confined in some prison or convent, there drilled, clothed, armed, and then sent on to the regular army. Such men avow their resolution to desert or run, on the first occasion. Of near one thousand soldiers sent from Toluca, to the aid of Santa Anna at Mexico, not one hundred stood the battle.

The whole people do not exceed eight millions; of these, about two millions are white, and mixed bloods; the remainder are native Indians, I never, in all Mexico, with the exception of foreigners in the capital, saw a single white man at work.

WINTER TRAVELLING IN RUSSIA.

Our engraving represents one of the couriers of the cabinet of the emperor of Russia. They wear a military uniform, with official epaulettes, according to their grade. There are constantly a certain number of these couriers in attendance, in a chamber of the imperial palace, to be despatched as occasion may require. These are confidential persons, and they receive their orders direct from the emperor; and, at any hour of the day or night, they are ready to receive instructions for departure, or for delivery of their despatches. At each post, there are relays of horses, especially kept for these couriers, whose approach is announced by a bell suspended from a circle above the head of the centre horse.

They travel with surprising rapidity, and they often receive large sums of money for their services.

The illustration shows the courier seated, and the mode by which he carries the despatches—in a leather bag; the car, driver, and horses, are alike characteristic portraits.

Those who have been accustomed only to our fine roads, and rapid and regular conveyances, can form but a very inadequate idea of the miseries attending a continental journey, more particularly in Russia, where, with the exception of the *Chaussée*, from Moscow to St. Petersburg, the roads are execrable; the springless vehicles, the most agonizing that can be imagined; and the post-houses so dirty, so comfortless, that the traveller frequently passes the night in the open air, in his travelling-carriage, rather than be exposed to the

filth, the swarms of vermin, and the disgusting effluvia, that would have annoyed him within.

Excepting those on the great road, already mentioned, there are no stage-coaches in Russia. The traveller is consequently reduced to the alternative, of either purchasing an equipage, or taking the rude vehicles of the country, and changing them at every stage.

His first preliminary before starting is, to give notice *three* days previously, of his intention, to the head police-officer of his quarter, who gives him a certificate, attesting that he has no unliquidated debts, nor any law-suit pending; he then procures from the bureau of the "grand-master of the police," a passport, without which he would not be allowed to pass the city gates. His next step is to arrange the mode of conveyance; of these he has the choice of two. Upon the payment of a stated tax, amounting to about a farthing per mile for each horse, he may obtain a government order, called a *padoroshnee*, entitling him to demand relays at every station, for which he will pay for hire about three fourths more for every horse. At each post-house, he will find a government officer, called a "smotritel," or over-looker, whose duty it is to register his name, and furnish the horses, which the peasants are bound to supply. Or, he may contract with a class of men called *yémshchikée*, who will undertake to convey him to his destination within a specified time. The former plan is generally adopted by those to whom the trifling additional expense is not an object; the latter method is, from its novelty, perhaps not unworthy of notice.

The *yémshchikée* are generally, but not exclusively, freedmen or crown-vassals, who, together with other immunities, enjoy an exemption from military service, upon condition of contracting with the government, for the regular supply of horses for its couriers, and for postoffice duty. They frequent, when in the cities, places called, "*postoyalee dróree*," or post-yards, situate in the principal streets entering the town. To these the traveller goes—they assemble round him in great numbers—he states the distance he wishes to be conveyed, and inquires the sum for which they will contract to take him; a consultation follows, and a price is named, generally as much again as they intend to take; he offers what he thinks a fair sum; another and another eager consultation—and at last, after long bargaining, the contract is made. He starts, and is driven two or three stages by the individual with whom he contracted, who then disposes of his bargain on the best terms he can to another, reserving to himself the difference—the amount of which alone the traveller pays him. The same transfer is made at intervals upon

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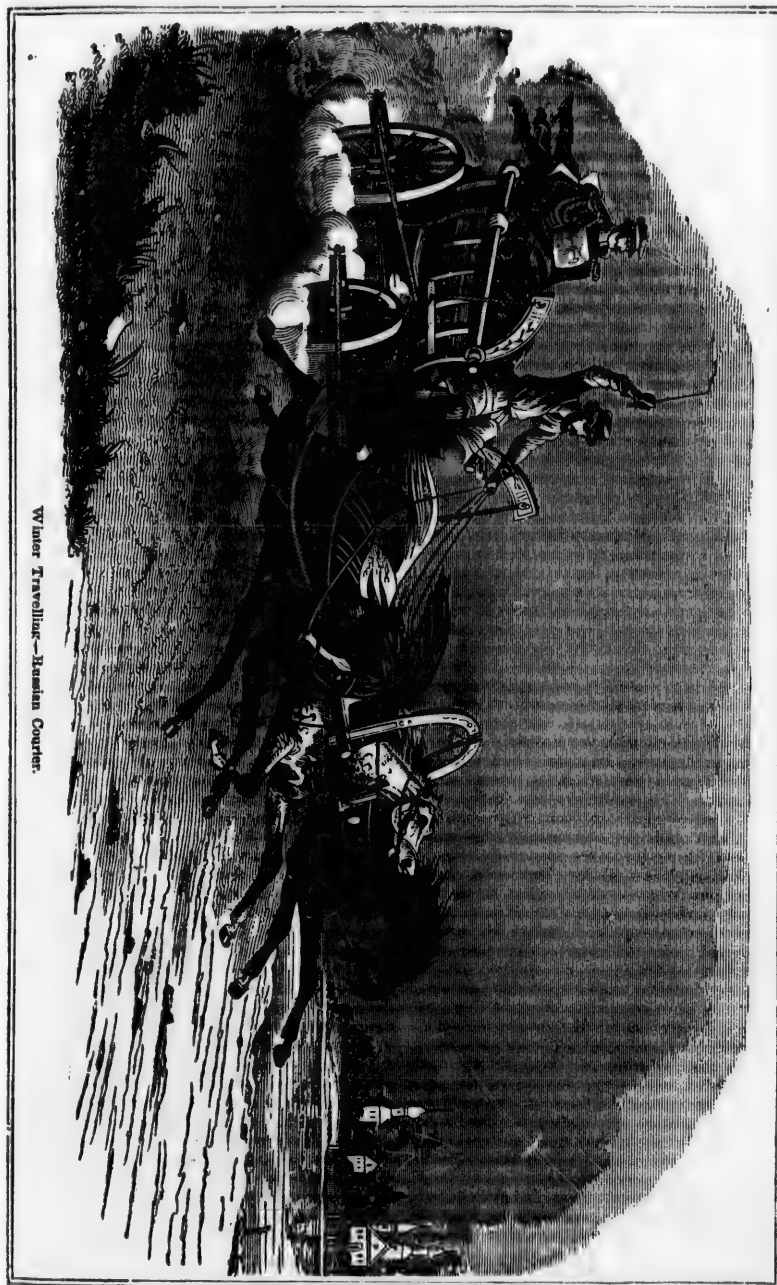
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Winter Traveller—Russian Courier.

the journey. Sometimes several may wish to take the contract: the question is then decided by lot, in a very singular way; one throws his whip into the air—another seizes it in falling, and the two then grasp it alternately, hand over hand, till they reach the end, when he who last has hold of it is declared the winner.

The yémshtchikee are a fine race of fellows: some of them, with their dark clustering hair, their ample beards, their sun-burnt features, and their brawny necks, would form studies for a Salvator Rosa. There is an air of bold frankness about them, which is highly pleasing. They have several melodies peculiar to themselves, which they sing almost without intermission the whole stage.

In fine weather, and over good roads, there is something delightfully exhilarating in sledge travelling; snugly enveloped in furs, while

. "The vault is blue
Without a cloud; and white without a speck,
The dazzling splendor of the scenes below;"

the traveller glides swiftly along the level snow, enlivened by the tinkling of the sonorous bell, attached to an arch that rises over the head of the centre horse, and cheered or soothed, as his mood may be, by the wild, yet plaintive song of his yémshtchik driver.

Cheerless as may be imagined

. "The deserts tossed in snow
And heavy-loaded groves"

of this frigid climate, yet are they not without their charms. In clear frosty weather, daybreak, on a vast plain, is pre-eminently beautiful. The sober gray of dawn, first faintly streaked in the east, with a pale red tinge, that gradually deepens into crimson, till the sun lifting his broad glowing disk, above the horizon, pours his level beams on the unsullied purity of the snowy scene, that blushes and sparkles in his glance, as glittering like gems upon its surface, countless icy crystals catch and refract his rays. In peculiar states of the atmosphere, the air is charged with innumerable atomic congelations, that dance and glisten in the sunbeams like minutest diamonds, tinged faintly of all the prismatic colors. They might also be fancied stray particles of frozen light, so brilliantly vivid, yet so impalpably delicate are they, the reader can not fail to have remarked, that when a stream of sunlight is permitted to fall into a darkened room, it appears filled with motelike particles incessantly in movement; let him then imagine the whole circumambient air filled with these, all glittering like little gems, and he will have some conception of this beautiful atmospheric phenomenon.

The forest, too, has its attractions. The snow, hanging in heavy masses on the pine-tree, and weighing down its branches, presents a striking contrast to the gloomy verdure of its dark foliage. The elegant weeping birch-tree is another object of interest, assuming the appearance of a delicate petrification, as the gracefully-slender fibres terminating its branches, droop to the very ground beneath the weight of their lucid covering.

With the approach of spring, the scene changes. Beneath the increased power of the sun, the snow loses its resplendent whiteness—the gem-like icy crystals are dissolved—the fir is stripped of its snowy mantle—the birch of its glossy covering. The great roads, becoming almost impracticable, are deserted, and sinuous by-tracks are made over the adjacent plains, or through the forests that skirt the road; these in a short time, are intersected by furrows, as regular as those of a ploughed field, but much deeper; their torturing monotony is indeed, sometimes varied by the succession of deep holes, filled with half-melted snow, through which the unhappy traveller is whirled, plunging and splashing at every step. Fancy, reader, for a moment, the luxury of being driven in a taxed-cart, or dragged on a hurdle, over the frozen ridges of a ploughed field, for the space of some five or six hours, and you will have some slight notion of the pleasures of travelling in Russia in the spring of the year. All this might be endured with complacency, if the cleanly comforts of a decent inn could be calculated upon, at the end of the stage—no such thing is to be found in the whole empire, out of the principal cities. The only substitute is the peasant's or yémshtchik's house, or the post-house; the latter is perhaps preferable, as there the traveller may probably get a leathern sofa, on which to rest his aching, and almost dislocated bones; beds are quite out of the question, and refreshments of any kind almost equally so.

The Russian nobility in travelling, take with them everything that is necessary for the roads; bedding, rugs, provisions, culinary utensils, wax-tapers, &c., with pastiles for fumigation, the latter a very necessary precaution, where the olfactories have not all together lost their sensitiveness. They are invariably accompanied by their cook—as in the majority of places, actually nothing is procurable, excepting black bread of the coarsest description, eggs, and sometimes milk; unless indeed, the traveller be content to partake of the peasants' luxury—boiled grain, eaten with hempseed-oil, as black and as thick as treacle, or a dish called *shichée*, a kind of cabbage-soup, in which float a few straggling strips of beef.

It must be distinctly observed, however,

that these remarks do not apply to the line of road between the two capitals, on which the inns are respectable, and not altogether destitute of the comforts of civilized life.

LECTURES ON ASTRONOMY.—No. 4.

BY PROFESSOR O. M. MITCHELL.

WE find that all the planets of which we have any knowledge, are revolving upon axes and all rotate in the same direction on their axes that they move in their orbits. Now as the earth is sweeping round the sun, it is held stationary to that great centre by the attraction of gravitation; but it would be held in its position even if it did not rotate upon its axis at all. Gravitation has nothing whatever to do with the rotation on its axis. But again: we find the earth sweeping round the sun in an orbit, the plane of which is located in a particular position in the heavens. Now, gravity would have held the earth equally steady to this centre, if that orbit, instead of sweeping in the direction it now does, had revolved in any other direction whatever, forming any possible angle with the present orbit. Once more: we find all the planets revolve about the sun in planes nearly coincident, travelling on in nearly the same direction. Gravity had nothing whatever to do with the inclination of their planes, nor with the starting of these planets in their orbits. If they had revolved in contrary directions, gravity would have held them just as perfectly; and indeed we find a full confirmation of this truth in the fact that the comets which come in from every possible section of the heavens, observe no particular direction either in the position of their orbits or the manner in which they sweep around the sun. They, too, are governed, as are the planets, by the law of gravitation.

Now the question arises at this point: is there no evidence of design in the structure of our system, that it was built in this way? Why do not all planets sweep in any direction at all consistent with the law of gravitation and having their planes inclined in any possible way, as the comets? I will answer it, and I think in a way satisfactory to every mind. If the system had thus been constructed, it would have contained within itself the seeds of its own destruction: it never could have endured; the time would have come when the planets would have rushed madly from their spheres and the whole system have been swept to utter destruction. We find that in order to preserve the stability of this beau-

tiful system, it is necessary that these planets should revolve in the same direction, and that the planes of their orbits should be nearly coincident with each other, and, furthermore, that the law of gravitation has nothing whatever to do with the localities of the planets. Suppose, for example, that Jupiter could be snatched from its present orbit and could occupy that which the earth now occupies, and we could throw the earth out to fill the mighty orbit of Jupiter: gravity would hold each of these equally steady. But then, even were all other bodies to move on in the position they now do, or in any combination which now exists, such an event would produce destruction. It is not possible to change places with any of these bodies and at the same time preserve the stability of the whole. Let us then mark the difference between what is absolutely dependent, and what is not dependent upon these laws: and in this difference we see that an Almighty Power has adjusted this vast machinery, and that it has been formed in infinite wisdom and with infinite skill.

With these views I shall proceed to the examination of the system with reference to those bodies recently discovered. But before I proceed it will be necessary to make some explanation with regard to certain matters involved in this discussion. And first, this matter of perturbation. I know this subject is somewhat difficult to understand; but a few words, I think, will be sufficient to render it quite plain. Suppose the sun to be located at a given point; at a distance equal to the shortest distance of the planet Mercury from the sun we locate that planet: this is its perihelion. Next let us place Venus; then the Earth; and so on with all the planets—all located in a right line and in their perihelion, or nearest position to the sun. Suppose they receive the primary influence which starts them on their mighty journeys. Now will they all come around again to occupy the starting point after a single revolution? No. Will these perihelion points remain in a right line after the first revolution? No. The very moment they start they begin to operate upon each other through the force of attraction, and all the elements of every orbit begin to be swayed backward and forward. These changes are going on perpetually—these perihelion points are moving onward, their eccentricities continually changing; and millions of millions of years will roll round, when at length—at the expiration of some mighty and almost inconceivable cycle, when this great time-piece of eternity shall have struck *one*—they will all occupy their original relative position and once more start on their immense journey. [Applause.]

Now, this being the case, how is it possible

for the human mind to reach to any knowledge of the influence of these bodies mutually on each other? for if the limits of their orbits are continually shifting, there must be some difficulty in getting at that influence; for before you can make any use of established positions they are changed again. This is all literally true; and the astronomer is obliged to seize every one of them, and even the sun himself, and weigh them in a balance: he is obliged to ascertain the amount of matter belonging to each and all of them; and when he shall have attained to this knowledge, he must then compute the influence which each exerts upon the other, and thus with long and patient toil trace out all their devious wanderings.

I shall now attempt to explain how it is that the *weight* of these distant orbs is determined. How can we weigh this earth against the sun? How can we place them as it were in some mighty balance and ascertain precisely how much one preponderates over the other? Follow me, if you please, in a very brief exposition of this problem. In the first place, the power of gravitation upon any body is determined, as all know, by the amount of velocity it is capable of producing in a falling body in one unit of time. If at the earth's surface a body falls sixteen feet in the first second of time, that is the measure of the intensity of gravity at that point.—But if this earth did not contain the amount which is now in it—if it were smaller, a body would not fall so far in a second of time.—There is a certain law establishing this, which we have ascertained. I have already stated that the moon is ever falling toward the earth, and the amount by which it falls is measured—we know it exactly; hence we know precisely the influence exerted upon the moon by the earth—and that is the first point. Now suppose, on the opposite side of the moon there was another earth, and it were as large as ours and equally distant, but contained double the weight of matter. At the same distance it would produce twice the effect of our earth. Increase its magnitude to three times and the effect is increased in like proportion. Now there is no such other earth, but there is the sun, and let us attempt to ascertain the comparative weight of the sun and the earth, by weighing the amount of action which each exerts upon the moon. In the first place, then, the moon is attracted by the earth and is caused to fall through a certain distance in a given time. Secondly, the earth itself is attracted by the sun and is caused to fall through a certain space in the same time. Now with reference to the magnitude of the sun, I think the moon and the earth may be regarded as equal. It is exactly like dropping two weights one of one pound and the other of two pounds to the

earth; they will both fall with the same velocity. So with the moon and the earth: the difference of their masses may be regarded as absolutely nothing. Now the sun deflects the earth from a tangent line by a certain amount which measures its influence upon the earth; likewise the earth deflects the moon by an amount which measures the intensity of its force upon that satellite. The amount of deflection produced in the orbit of the earth is more than double that exerted by the earth upon the moon; hence if the sun were equally distant from the moon with the earth, it should be twice as heavy as the earth, because it produces twice as much effect. But the truth is, it is not at an equal distance—it is four hundred times further off. If then at this distance it produces twice the effect of the earth itself, we must increase it in the ratio of the square of 400, or 160,000, this number must be multiplied into the exact ratio of the influence of the two as already estimated at an equal distance, which carries it up to 354,436 earths; and that is the precise ratio existing between the mass of the earth and the sun. Thus it is that we are able literally and absolutely to weigh these bodies one against the other: hence every satellite which revolves about its primary planet, gives us the means of weighing that primary.

But what is to be done in cases where there are no satellites? Here the problem is more difficult. The influence exerted by other planets on these bodies in swaying them from the paths which they otherwise would have pursued, tells us the amount of matter belonging to them. In this way astronomers have attained to a most accurate knowledge of the value of the mass of all the planets.

It is true that in the instance of Jupiter, La Place in his earlier computations made it out different from subsequent discoveries. He said that it would require 1067 Jupiters to make a mass equal to the sun. He reached this conclusion from a series of observation made by the astronomer Puond, and when he had examined them all critically he said that the mass could not be in error by one hundredth part of its value and that the chance of its varying to that amount was as eleven millions to one. He had brought all the powers of analysis itself into the calculations, and the probabilities of his being in error were as I have stated. But it seemed as if chance was not to have its peculiar dominion invaded in this way, and, if I may be allowed to use the expression, chance determined to chastise the hand that had ventured to draw aside the curtain and unveil her mysteries; for it has been proved most positively that that one chance out of eleven millions was the one that turned up, and La Place was wrong. [Ap-

both fall with the same velocity the moon and the earth: the masses may be regarded as equal. Now the sun deflects the orbit line by a certain amount, its influence upon the earth; the sun deflects the moon by an amount which measures the intensity of its attraction. The amount of deflection in the orbit of the earth is the same as that exerted by the earth upon the moon, if the sun were equally distant from the moon with the earth, it should have the same effect. But the truth is, the sun is at an equal distance—it is four times the distance of the moon from the earth. Hence the effect of the sun is increased in the ratio of the square of the distance, or 16,000,000, this number must be multiplied by the square of the distance of the moon from the earth, which carries it up to 354,436. This is the precise ratio existing between the mass of the earth and the sun. We are able literally and absolutely to measure these bodies one against the other, the satellite which revolves round the earth, gives us the means of measuring the primary.

It is done in cases where there is a problem more or less influenced by other bodies in swaying them from their otherwise would have the amount of matter belonging to them. This way astronomers have obtained accurate knowledge of the masses of all the planets.

In the instance of Jupiter, Laplace's computations made it out of subsequent discoveries. He would require 1067 Jupiters to equal the sun. He reached this from a series of observations of the comet Pons, and when he examined all critically he said that it was not in error by one hundredth part, and that the chance of that amount was as eleven to one.

He had brought all the power of his own mind into the calculations, and of his being in error were as small as the chance of his being right. But it seemed as if chance itself had invaded his peculiar dominion, and he said, if I may be allowed to use the word, chance determined to chastise him, and ventured to draw aside the veil of her mysteries; for it has been positively stated that one of the seven millions was the one that Laplace was wrong. [Ap-

plause.] The fact was, the measurements had been made indifferently and a long time ago. He had used a computation made upon a little body called Encke's comet, and from the ethereal mass of the elements of this ghost of a world, so filmy that it has not the power to lessen even the light of the smallest stars that shine through it, he had made his calculation of the mighty orb of Jupiter. The mass of Jupiter, as computed by Laplace, was employed to determine how much disturbance existed there, and there was not enough. So when this mass was applied to other calculations and suspicions were aroused that it was inaccurately calculated, it excited other measurements, until at length all agreed very accurately in giving the mass of Jupiter such, that 1049 such bodies would make one sun.

We proceed now to the structure of our system. It will be remembered by all who heard me in my second lecture, that the older planets were for a long time known. They are arranged according to a very curious law, with reference to their distance from the sun. It is known, for example, that when passing out from the sun to Mercury, and from Mercury to Venus, there is a certain ratio of distance, which holds true in regard to the distance of the other planets, for an immense space of 350,000,000 miles, until you come to a mighty gulf, within which no planet was known to revolve; and the moment that limit was passed, the old law was resumed. This curious law was detected by Bode. I will explain the law in a simple manner. Beginning with the first of this series as nothing, and assuming 3 for the first distance, we have the following series: 0, 3, 6, 12, 24, 48, 96, and so on. This is obtained by multiplying each succeeding term by two. Now, if you add 4 to every term of the series, you have another series as follows:—

Mercury.	Venus.	Earth.	Mars.	Jupiter.	Saturn.
4	7	10	16	28	52
					100

and so on. This latter series represents most accurately the distance of all the planets from the sun. But in passing from Mars to Jupiter the link was broken—there was no planet to fill up the space—and when Baron de Sac detected this law, and found it to be perfect in every other instance, he came to the conclusion, and could not resist the conviction, that a planet unknown revolved in that space. Such was his absolute conviction, that he actually commenced a computation of its orbit in 1784. He made out its distance, and published the elements of its orbit, fifteen years before any bodies were known to exist in that space. In the year 1800 such was the effect produced by his investigations, that a congress of astronomers met at Lilienthal, to unite upon a plan for hunting down this unknown body.

They agreed to divide the whole region into zones, twenty-four in number, or one to each astronomer. They commenced their labors on the first day of the first year of the present century, and before they had hardly commenced, one of their number detected a small star which did not exist on his chart, although he had laid down upon it, as he supposed, all the fixed stars. His name was Piazzi, of Palermo. With what anxiety did he wait till the following night again to examine this stranger!—When the next night came round, to his inexpressible delight he found it had changed its position, and was actually retrograding as a planet ought to do. But he did not venture to believe he had so soon discovered this unknown wanderer, and only told his friends he had found a very suspicious body and supposed it might be a comet, but he could not tell—it looked very much like a planet. Baron de Sac, when he heard of this discovery at once seized it, saying: "This is my planet which I have so long predicted." He took a few observations, but in consequence of the fact that it soon fell into the rays of the sun, only a few observations could be made, so that but for the extraordinary discovery of other bodies, by other observations at short intervals it could not have been known to be a planet. But Baron de Sac at once commenced a computation of its orbit. They had all agreed in assigning to it exactly the place that could be occupied, in order to make the law of relative distance which had previously been thought to exist, apply in this last instance. Baron de Sac knew the planet was found, and when he compared his own investigations with those which were found to result from actual observation, it was discovered that he had predicted its place precisely.

While all the astronomical world was rejoicing in the beautiful law and the complete establishment of the harmony of the system, another object was found—another planet was detected which seemed to have an orbit precisely similar to the one already found. Here was a most astonishing anomaly—two planets revolving in orbits nearly coincident. The like was to be seen nowhere else in the entire system. What could be the meaning of this? How happened it that these two little bodies occupied this place and with orbits so nearly equal? Others conceived the idea that they were fragments of a former mighty planet which by the action of some powerful force, had been rent asunder and scattered in every direction.—Strange theory this! passing strange! But follow me through this curious history, and then decide if there be any foundation for its truth, or whether it is merely an astronomical dream. In a very short time, to the astonishment of the world, Harding finds

another planet. There are three. Olbers was confirmed in the opinion that his theory was true, and, said he, "If this convulsion did take place and the fragments were scattered, then, inasmuch as they started from the same point, they must all revolve to that same point in their orbits." If he could find the place where their orbits intersected or crossed each other (which we have already explained as the nodes), inasmuch as these were common points, it might be true such a disruption had taken place. It was on this hypothesis that, after watching from night to night and from year to year in the particular region of this node, they finally detected a fourth body. Here, at length, were four bodies revolving in nearly the same orbits, and thus the truth of this wonderful hypothesis was verified.

Again, an investigation was made to ascertain the amount of force necessary to burst a planet and separate its fragments. Le Grange demonstrated that with a force 150 times greater than that given to a cannon-ball the particles would sweep off in an orbit called the parabola; but that the force of twenty times would give elliptic orbits of different degrees of eccentricity. There is also another point: in case this theory was true, the larger fragment would occupy more nearly the orbit described by the original body, and the smaller one revolve more obliquely to the plane of the ecliptic.—This was found to be the fact: in comparing their bodies and their orbits some of the smaller ones made an angle as high as 30 degrees, with the plane of the ecliptic, and had exceeded the plane of the zodiac which confines all the rest of the planets.

When they were thus fixed and determined, and after fourteen years of examination all had been done that it seemed could be done, and the investigations need not continue any further with the hope of success, many years rolled round and finally in December, 1845, we hear announced that another of the asteroids had been added to the four: *Astrea*, discovered by Encke of Dresden. He was prosecuting this examination for the purpose of finding the nodes of the asteroids and on the plane that had been previously adopted, having more accurate charts of the heavens with the stars more carefully laid down. The moment he detected a new star he suspected it of being a planet, and a few evenings would always settle the investigation; and in this way he detected *Astrea*. For two years he continues, when lo! he has found another planet, and *Hebe* is added to our system. But he had scarcely described it, when *Hind*, an Englishman, has fished up another, *Iris*; and before we know the name given to this one, the same astronomer announces another, and *Flora* is joined to the other seven! Thus we have the beau-

tiful phenomenon of a group of eight sisters revolving around the sun in orbits of nearly equal magnitude, in periods absolutely identical; all occupy the centre of the space between the planets *Mars* and *Jupiter*, and by their joint action, their joint mass, their joint distances, fulfilling this beautiful law of *Baron de Sac*.

Having gone through the examination of these objects, I shall proceed to give an account of the planet *Jupiter*. This is the largest in our system, and one of the oldest known. We have, indeed, no knowledge of the time when this beautiful orb was unknown. Go back to the pages of history as far as you please—go even beyond the limits of tradition—still you find that this planet was known to the earliest inhabitants. "How do we know this?" some will have already inquired. Let me tell you. If we go to the records of the earliest nations, we find invariably this curious fact: that the days of the week, seven in number, are named after the planets, counting the sun and moon, thus—the Sun, the Moon, *Mars*, *Mercury*, *Jupiter*, *Venus*, *Saturn*. Every nation—the Chinese, the Egyptians, the Persians, the Chaldeans—have applied the names of the planets to the days of the week. They do not, to be sure, begin the week on the same day; but beginning with their first day, they run round the cycle exactly in the same order. There is but one way of explaining this remarkable coincidence, and that is: they must have received this from some nation anterior to either of them; it must have come down from the same common origin. Hence we run back anterior to tradition itself to find the first discovery of these planets.

In this beautiful planet, *Jupiter*, we find one that fastened the gaze of the earliest minds that turned their attention to the heavens, and by possibility it may have been detected before *Venus*; for *Jupiter* is seen at all possible distances from the sun, while *Venus* is always comparatively near.

When the telescope was first directed to this wonderful orb, a sight was revealed to the astonished gaze of old *Galileo*, that seemed almost to stupify his mind; there were four beautiful moons revolving about this noble orb, obedient to its attraction. You all remember that at the time this discovery was made the battle was raging between the old and new school of philosophers; those who believed with *Ptolemy* and those who followed *Copernicus*. *Galileo* had become a convert to *Copernicus*, stood up the champion of truth, and fortunately for the world armed himself with a power that all the antagonism of earth could not withstand. "You tell me," said he, "the earth is the great centre about which the universe is revolving; now I tell you that

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yonder globe shows a miniature system like
our own, and while we have a single moon,
there is a planet which has no less than four.
Do not then attempt to impose this impossi-
bility upon me. I do not believe it." He
combated those who opposed the progress of
truth, till finally he incurred the displeasure
of the church itself. You all know the fact,
that, borne down by the weight of years, he
was brought before the inquisition and forced
to recant his opinions in the most solemn man-
ner; but such was the power of truth that in
spite of all the threatening by which he was
surrounded, as he rose from his knees he
stamped upon the earth and said, "She does
move, though."

It seems that Jupiter and its satellites were
given for a most valuable purpose, and I ask
your attention to but one or two of their uses.
And first, the fact that they served to deter-
mine the velocity of light. I know many
minds revolt from the conclusion which as-
tronomers have reached, when they say that
light flies twelve millions of miles in a minute,
and that there are objects so distant that their
light would require the enormous period of
fifty thousand years to reach our earth. In
the language of my "old friend"—"this is a
hard story." It is incredible; but before this
course of lectures closes I intend to show clearly
and positively how this has been determin-
ed and how much reliance is to be placed upon
this wonderful revelation.

Previous to the discovery of the satellites
of Jupiter, and their eclipses, it was believed
that light passed instantaneously over the most
distant space. It was believed that if a lamp
was lighted and the eye could see it through
a space of millions of miles, that the instant
it was lighted the eye, if directed toward it,
would see the light. On the discovery of
Jupiter's satellites, they were found revolving
in such orbits that in every revolution the
three interior ones were always eclipsed and
disappeared from the sight. It did not require
a long series of observations before the astron-
omer began to predict the coming of their
eclipses as we do those of the moon. He ex-
amines the result of his computation, and after
a while detects a certain amount of discrepan-
cy between the observations at the two op-
posite points of its orbit.—He tries again, but
in spite of all efforts, after long years of toil,
he could not reconcile the predictions exactly
with the observations, and then he began to
inquire if by possibility there could not be a
law which would reconcile them. Let me
endeavor to show how this was attained. Sup-
pose the earth to be at a given point in its
orbit, and Jupiter to be in that part of its orbit
on the same side as the earth: the distance
which separates them is precisely the differ-

ence of the distance of the orbits from the
sun.—But let the earth move round to the
opposite side of the sun and Jupiter remain as
before: the distance is now increased by the
whole diameter of the earth's orbit 190,000,000
miles. Now the observer on the earth,
when nearest to Jupiter, will, in the eclipse
of its satellite, see the light disappear too soon
according to the computation. Why? Be-
cause the stream of light is shorter by an
amount equal to the whole diameter of this
orbit, and consequently runs out more quickly.
—When he takes his observation from the
opposite side of the earth's orbit, he finds the
eclipse comes on too late, because the stream
has 190,000,000 miles further to run, and of
course he will continue to see the satellite till
the stream runs out. Now, then, in this way
we are able to determine how long it takes
light to pass across the earth's orbit. Then
by ascertaining the exact difference in these
extreme points, this single calculation of the
velocity of light would account for all the dis-
crepancies, and reconcile theory and observa-
tion in the most perfect manner. But to pass
across this orbit requires sixteen minutes;
hence the velocity must be at the rate of
12,000,000 of miles in a minute.

Here, then, is the foundation upon which
this result was first rested. "Well," some
skeptical mind will say, "that is only a single
observation; give me confirmation of it from
some other sources, or I must reject so aston-
ishing a result." For a long time the astron-
omer was at fault, and the skeptic had in some
sense the advantage. But at length a better
series of observations are at hand. In certain
examinations of the fixed stars it is found that
these little points of light, when critically ex-
amined, appear to be moving according to a
certain law and describing a minute orbit.
The cause of this was perplexing to the as-
tronomer, and baffled all the efforts of one of
the strongest minds that ever gave its powers
to this subject. But finally the explanation
was discovered in the fact that it was owing
to the effect produced by the aberration of
light—that as the ear swept round its own
orbit, the light in coming to us caused the body
to appear in different positions from that in
which it then occupied. Let me make this
intelligible. Suppose you desire to cross a
river, and the stream will carry you down,
and you wish to land at a point fixed upon
the opposite shore. Will you start out from
an exactly opposite point and row directly
across to the opposite shore? By no means,
because you know you will in that case land
below. Now how far above will you make
your starting point? Just as far above as the
current will carry you down in the time you
expect to occupy in crossing. But what has

this to do with the velocity of light? I will tell you. Every particle of light that leaves yonder orb, in coming toward us sweeps downward in the direction of a right line, and when the astronomer turns his telescope to receive that point of light and to cause it to pass down the axis of the tube, he must take into account the fact that he himself is moving with a certain velocity. As he is borne on by the movement of the earth, he must take in the other fact that every particle of light is coming with a certain velocity, and he must incline his instrument so as to cause it to pass down its axis. The amount of inclination depends upon the velocity of light, as the distance you would be carried down the river depends upon the velocity of the water, and when we have inclined our tube so that the visual ray shall hit the mark, that inclination is precisely what ought to be given it. Upon all this calculation it is found that light travels twelve million miles in a minute. Here is confirmation strong and irresistible.

But one step further: it is found that certain stars are united together—not a planet revolving round a sun, but two mighty suns revolving about each other. To this matter I will call your attention more particularly hereafter. In a certain system of double stars which had engaged the scrutiny of the very ablest minds, there were found discrepancies between the observations and computations which could not be reconciled for a long time. The problem seemed utterly beyond our reach; but at last, within a short time, one of the German astronomers discovered that the whole difficulty has grown out of the fact that the velocity of light was not taken into the account, and that the fact that the star was sweeping around a mighty orbit, and thus impressing its own motion upon the particles of light was not considered. When it was, all the discrepancies disappeared and the velocity of light comes out precisely as before. Here, then, are three demonstrations from different sources all coinciding; I will not say exactly, but nearly so.

The reason why I do not say *exactly* is this: a very short time ago I received a communication from M. Struve, a Russian astronomer, who said he was engaged upon the subject of the velocity of light, and had determined what is called the constant aberration of the fixed stars, and found the value for them was a little different from that obtained in regard to the satellites of Jupiter.—There was a slight variation, perhaps a thousandth part of the whole, yet it could be measured, and he said it was impossible there might be a difference between the velocity of direct and reflected light. And he begs me in consequence of the peculiar position of my observatory being more

advantageous than his, to furnish a series of eclipses of the first satellite of Jupiter through the next ten years, with a view to determine thereby any difference between the actual velocity of direct and reflected light.

The is the kind of accuracy attempted to be attained in our own day; and this, in truth, is the accuracy which is actually reached. You may think it is spending time in vain to work for ten years to settle a question in which the discrepancy gives you only a second decimal place; but how important it is to know whether this mysterious element in the original movement of light is different from that when it impinges upon the surface reflecting it, will be perceived when we reflect that the computation affects the movements of all these bodies, and that by a correct calculation of this apparently insignificant feature we attain to a degree of accuracy that we can not reach in any other way.

ESQUIMAUX INDIANS.

THE vast region of country lying on the north shore of the gulf of St. Lawrence, and extending to the eastward of the Saguenay as far as Newfoundland, is generally known under the name of Labrador. It is an exceedingly wild and desolate region, and, excepting an occasional fishing hamlet, or a missionary station belonging to the Moravians, its only inhabitants are Indians. Of these the most famous tribes are the Red Indians (now almost extinct), the Hunting Indians, the Milk-maks, and the Esquimaux. The latter are by far the most numerous, and it is said that their sway extends even to the coasts of Hudson's bay. They are at the same time the wildest and most rude inhabitants of this wilderness, and in appearance, as well as manners and customs, closely resemble the inhabitants of Greenland.

"During one of my nautical expeditions down the St. Lawrence," says a celebrated traveller, "I chanced to be wind-bound for a couple of days at the mouth of a nameless river on the north shore, where I happened to find a small encampment of Esquimaux Indians. The principal man of the party was exceedingly aged, and the only one who could convey his thoughts in any other language than his own. He had mingled much with the French fur-traders of the north, and the French fishermen of the east, and possessed a smattering of their tongue. Seated by the side of this good old man in his lodge, with a moose-skin for my seat, a pack of miscellaneous furs to lean against, and a rude sea-oil torch suspended

his, to furnish a series of satellite of Jupiter through, with a view to determine the difference between the actual and reflected light.

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ESQUIMAUX INDIANS.

of a country lying on the gulf of St. Lawrence, and westward of the Saguenay and, is generally known as Labrador. It is an extensive region, and, excepting a few hamlets, or a missionary to the Moravians, its only inhabitants. Of these the most are Red Indians (now almost extinct), the Milk-makers, and the latter are by far the most numerous, and it is said that their numbers are increasing to the coast of Hudson's Bay at the same time the wildest and most numerous of this wilderness, as well as manners and customs resemble the inhabitants of

of my nautical expeditions to Lawrence," says a celebrated explorer, "I was obliged to be wind-bound for a week at the mouth of a nameless bay, where I happened to meet a number of Esquimaux Indians. One of the party was exceedingly good at conveying any other language than his own, and he was much with the French and the English. He possessed a smattering of English, and was assisted by the side of this good language, with a moose-skin for a paddle, and a sea-oil torch suspended

over my head, I spent many hours of one long-to-be-remembered night in questioning him about his people. The substance of the information I then collected, it is now my purpose to record; but it should be remembered that I speak of the nation at large, and not of any particular tribe.

"According to my informant the extent of the Esquimaux nation is unknown, for they consider themselves as numerous as the waves of the sea. Much has been done to give them an education, and though missionaries of the cross have dwelt among them for about a century, the majority of this people are at the present time in heathen darkness. The men are chiefly employed in hunting and fishing, and the domestic labor is all performed by the women. Their clothes are made in the rudest manner imaginable, and generally of the coarser skins which they secure in hunting. They believe in a Supreme Being, who has a dwelling-place in the earth, the air, and the ocean, and who is both good and evil; and they also believe in the immortality of the soul, which they describe as similar to air, which they can not feel. Their principal men are magicians and conjurors, distinguished, as I infer with good reason, for their profligacy.

"Whenever a man is sick they attribute the cause to the alleged fact that his soul has departed from his body, and he is looked upon with contempt and pity. The first man who came into the world sprang from the bosom of a beautiful valley; in this valley he spent his infancy and childhood, feeding upon berries, and having on a certain occasion picked a flower that drooped over one of his accustomed paths, it immediately became changed into a girl with flowing hair, who became his playmate, and afterward his wife, and was the mother of all living.

"They believe in a heaven and a hell, and consider that the road to the former is rugged and rocky, and that to the latter level and covered with grass. Their ideas of astronomy are peculiar, for they consider the sun, moon, and stars, as so many of their ancestors, who have, for a great variety of reasons, been lifted to the sky and became celestial bodies. In accounting for the two former, they relate that there was once a superb festival given by the Esquimaux in a glorious snow-palace of the north, where were assembled all the young men and maidens of the land. Among them was a remarkably brave youth, who was in love with an exceedingly beautiful girl. She, however, did not reciprocate this attachment, and did all in her power to escape from his caresses. To accomplish this end she called upon the Great Spirit to give her a pair of wings; and having received them, she flew

into the air, and became the moon. The youth also endeavored to obtain a pair of wings, and after many months, finally succeeded; and on ascending to the sky he became the sun. The moon they say, has a dwelling-place in the west, and the sun another in the east. They account for thunder and lightning by giving the story of two women who lived together in a wigwam, and on one occasion had a most furious battle. During the affray the cabin tumbled in upon them, causing a tremendous noise, while the women were so angry that their eyes flashed fire. Rain, they say, comes from a river in the sky, which, from the great number of people who sometimes bathe in it, overflows its banks, and thus comes to the earth in showers.

"When one of their friends has departed this life, they take all his property and scatter it upon the ground, out of his cabin, to be purified by the air; but then in the evening they gather it together and bury it by the side of his grave.—They think it wrong for the men to mourn for their friends, and think themselves defiled if they happen to touch the body of the deceased, and the individual who usually performs the office of undertaker, is considered unclean for many days after fulfilling his duty.

"The women do all of the wailing and weeping, and during their mourning season, which corresponds with the fame of the deceased, they abstain from food, wear their hair in great disorder, and refrain from every ablution. When a friendless man dies, his body is left upon the hills to decay, as if he had been a beast. When their children die, they bury the body of a dead dog in the same grave, that the child may have a guide in his pathway to an unknown land, to which they oppose all children go.

"Polygamy, as such, among the Esquimaux is practised only to a limited extent, but married men and women are not over scrupulous in their love affairs. Unmarried women, however, observe the rules of modesty with peculiar care, and the maiden who suffers herself to be betrayed is looked upon with infamy. When a young man wishes to marry, he first settles the matter with his intended, and then, having asked and obtained her father's permission, he sends two old women to bring the lady to his lodge, and they are considered one. Children are taught to be dutiful to their parents, and until they marry they always continue under the paternal rod.

"The amusements of the Esquimaux do not differ materially from those of the Indian tribes generally. They are fond of dancing, playing ball, and a species of dice game, while the women know of no recreation but that of dancing and singing."

WATER IN THE DESERTS.

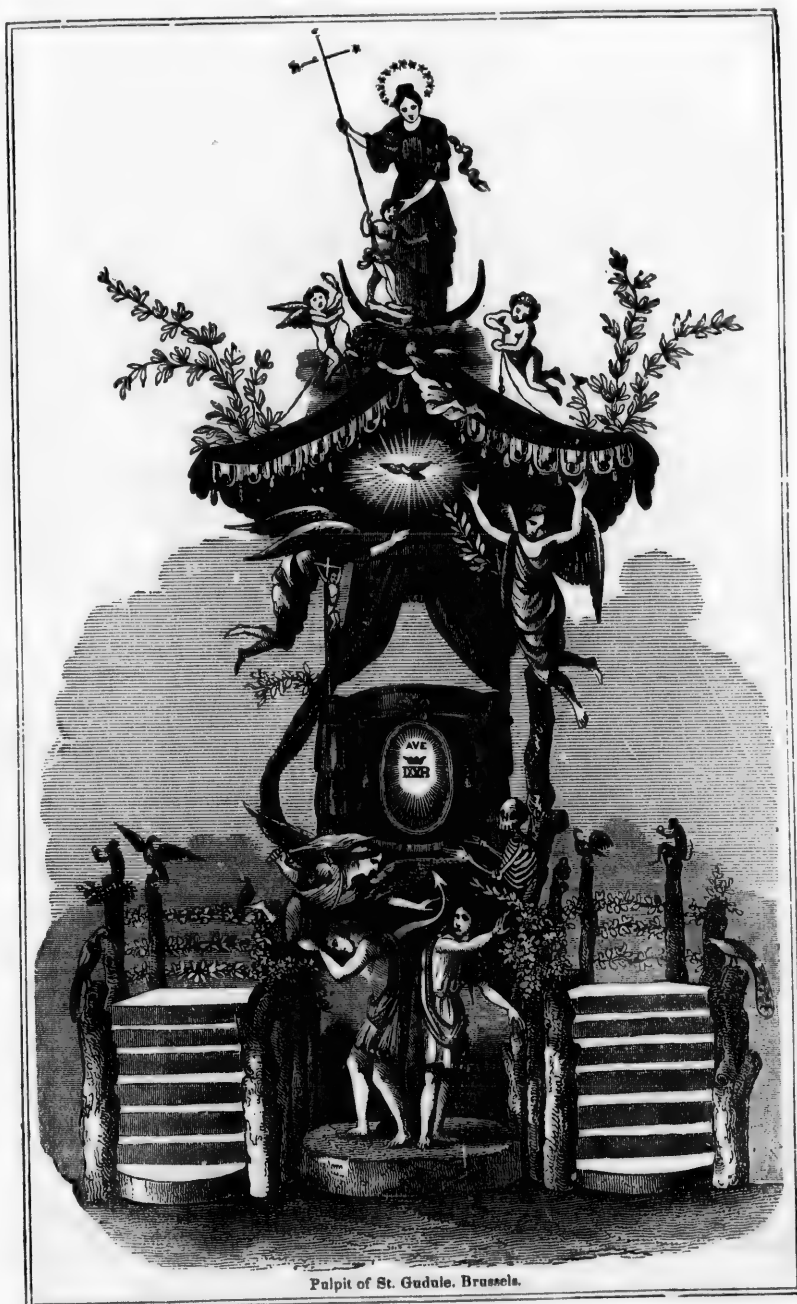
A CHEAP and convenient mode of procuring water is adopted in some places, where the sinking of wells would be either too expensive, or, from the great depth, quite impracticable. The method is simply by boring with a kind of large auger, till the instrument reach to a reservoir of water under ground, which then rises to the surface through the auger-hole, and issues in a jet, by means of a tin-pipe, which is fixed in the opening. This method, however will only be successful in certain situations, and these occur chiefly in districts where the rock next the soil is formed of beds of sandstone. When these beds lie sloping upon one another, water oozes into the soil at their upper edges and continues trickling down between the layers, and gathering by the same process from different quarters, till it runs along in some of the interstices in a constant but slow current. It is forced to flow down the slope by the accumulated weight of its own body above, but finds no ready vent in the downward direction it is pursuing; hence it works onward under a great pressure; and if any opening is presented to it either above or below, it rushes into it with great force. Such an opening is the auger-hole of the borers, which, lighting on a body of water thus pressed on all sides, is filled instantly, and becomes a fountain throwing out its jet often to a considerable height. This mode has been practised with great and beneficial success in some of the sandstone districts of England, formerly ill supplied with water; but more interest is attached to it from a trial which has been made in certain places of Africa, where water is as scarce and as valuable as in a ship that has been six months at sea. The experiment was tried by Mr. Briggs, the British consul in Egypt, under the patronage of the pacha of that country, and was attended with complete success. Wells were opened, and reservoirs formed of thousands of cubic feet of water, in places where the sands had hardly ever been moistened, even by a shower, since the creation of the world, and where the Arabs, in performing the ceremonial washings of the body required by their Mohammedan law, were obliged, like sparrows on a dusty road, to go through the forms with sand in the absence of water. These reservoirs were formed, we believe, on what would, if water were present, be a great commercial line of communication between the Nile and the Red sea; and there is every prospect that they will be the means of establishing such a line. But the importance of the discovery would be ill appreciated, were we to suppose its operations limited to this point. The vast sandy desert of Africa, a

tract more than 2,000 miles long, and 1,000 broad, is almost without water, and has hitherto been a barrier preventing all communication between the northern shores of the country, and the fertile districts southward in the interior. This region is everywhere filled with districts presenting the same kind of formation of rocks, as that in which water has been so easily procured elsewhere; and there is hence the prospect that wells may be opened on the route from Tripoli to Fezzan, Bornou, and Timbuctoo, on a road which is now covered with the bones of thousands who have died from want of water in attempting to pass it. Major Denham was at times waked from a reverie on horseback while passing this dreary track of sand, by his horse's hoofs treading on the crackling and dried skeletons which lay in the way, of travellers who had perished by thirst. The probability of finding water, by boring, on this route, is increased by the opinions current among the natives, who believe that there is here what they call an *underground sea*, and that it is only on the surface that drought prevails. There is, besides, no doubt that the same kind of structure exists here which has furnished water in other places; and it is more than likely that wells might be found, not only for supplying travellers, but for carrying on cultivation. This simple discovery, therefore, may, in process of time, have an effect as powerful upon the torrid districts of the earth, as any of the great inventions of modern times have produced in Europe. It is only the want of water which leaves the central parts of both Arabia and Africa in the state of deserts. If the soil were duly moistened, it would be as fertile as other parts of the tropics; and there is much reason to anticipate, that, when this process comes to be understood and valued as it ought, many portions of the desert will become so. It is an agreeable idea to anticipate, that an apparently trifling discovery, originating from the geological science of England, may be the means of raising up new corn-islands in the African sands, and conferring on the wandering Bedouin many of the blessings of civilization.

FEMALE EDUCATION.—The present system of female education, aims too much at embellishing a few years of life, which are in themselves so full of pleasure and happiness that they hardly need it, and then leaves the rest of existence a miserable prey to vacancy and idle insignificance. The real object of education is to give children resources that will endure as long as life endures, habits that time will ameliorate, not destroy, occupations that will render sickness tolerable, solitude pleasant, age venerable, life more dignified and useful, and death less terrible.

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Pulpit of St. Gudule, Brussels.

CHURCH OF ST. GUDULE.

THE church of St. Gudule situated in Brussels is of the Gothic order of architecture, and has a majestic appearance. It is one of the most ancient of the old country, the foundation having been laid in 1010, though it was rebuilt in 1226. Its shape is that of a cross, the door on account of its location upon the side of a hill is reached by a flight of steps some forty in number, and two square towers of equal height give the *façade* an imposing effect.

The interior of the church is simple and dreary, and the large pillars which sustain the roof are without any ornament though colossal statues of Jesus Christ, the Virgin Mary, and the apostles are attached to different pillars. These statues are the work of the sculptures of those days, though they have no great claims as works of art.

The principal altar is modern in its appearance and the tabernacle contains an ingenious piece of mechanism by which the holy sacrament is made to rise or fall according to the wish of the priest. On the left of the altar is a superb mausoleum erected by archduke Albert to the memory of John II. duke of Brabant, who died in 1312, and his wife Margaret of England who died 1318. The monument which covers their cinders is of black marble, surmounted by a lion. Opposite to this monument is that of the archduke Ernest, who died in Brussels in 1595. The monument also in this edifice, consecrated to the memory of Chauvine Triest, is the work of Simonis. Charity is represented by a female holding upon her knees a newborn infant and inclining to the left she is offering to one older a shell filled with water for its thirst. On the right is a third child still older, in the attitude of rendering thanks to Heaven for the benefits which charity bestows upon himself and brothers. The subject has been often treated but never more cleverly.

The most remarkable object of interest, especially to the stranger, is the pulpit of Saint Gudule sculptured in wood, of which we give a representation. It will be seen that the designer Henry Verbruggen was entirely original in this conception. It represents Adam and Eve chased by the angel from the garden of Eden.—On the right, Death also follows them, and on the top the Holy Virgin is crushing the head of the serpent with a cross which she holds in her hand. The work is finished with great care, though we can not conceive for what purpose the originator introduced the monkey and birds which are perched there, and when we witnessed it excited the risibilities of the visitors. The other figures are symbolical and easily comprehended.

A VISIT TO VENICE.

ON the 5th of September last, an hour or two before sunset, I took my place in the diligence, which twice a week leaves Milan for Venice. At ten o'clock we reached Bergamo, and stopped half an hour in its suburb, the *Faubourg St. Leonard*, from which the city, built on a hill, or rather a mountain, and enclosed by massive walls, showed most beautifully in the moonlight. Some hours after, we made a similar halt at Brescia, another ancient city, rich in magnificent edifices and Roman remains, the centre of a fertile province. Soon after sunrise, our road lay for many miles along the margin of a beautiful lake, formerly called Benacus, now the *Lac de Garda*, its shores studded with pretty villages. At noon we reached Verona, situated on both banks of the Adige, over which river are thrown four beautiful bridges. This city, so captivating to the imagination from its associations with "Romeo and Juliet" and the "Two Gentlemen of Verona," possesses, in visible reality, one of the most perfect and remarkable Roman relics to be found in all Italy. The celebrated *amphitheatre of Verona* is, this day, in its interior structure, almost exactly what it was, when, nearly eighteen hundred years ago, twenty thousand Romans, seated on its marble benches, watched with eager eyes the gladiatorial combats in the arena below. The exterior circumference of this vast elliptical edifice is fourteen hundred and thirty-four feet; the height of the cornice from the level of the street, one hundred feet. Within, the tiers of seats, forty-five in number, ascend from the arena to the level of the third story of external arches—of which only four remain of the seventy-two that, arranged in three stories, originally formed the *façade* of this grand structure.

Our stay of two hours at Verona barely sufficed for a visit to the amphitheatre, after which we dined and resumed our places in the diligence. It was near sunset when we reached Vicenza, a city of palaces, the enduring memorials of opulence and splendor long since departed. Vicenza was the birthplace of the celebrated architect *Palladio*, and he adorned his native city with magnificent edifices, which in any other land than Italy would attract crowds of admiring pilgrims from all quarters. I walked awhile through its silent and deserted streets, gazing at the beautiful architecture, which seemed still more impressive to the imagination from being thus strangely contrasted with the air of desolation around.

At Vicenza, a gentleman and lady, the former in a half-clerical dress, took places in the diligence, and I soon had occasion to con-

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gratulate myself on this accession to our party. My previous companions had been very courteous in their manners, but, as they spoke only Italian, our verbal intercourse had been very limited. This they probably intimated to the new-comer, for he soon addressed himself to me in French, and finding that I was a pilgrim from a land so distant, entered into a very interesting conversation in regard to the most remarkable objects to be sought after in Italy. Rarely have I met with more courtesy and politeness than this stranger manifested. My difficulty in understanding the French when spoken, only served to display the more perfectly a degree of patience and urbanity on his part, which, I greatly fear, a foreigner, situated as I was in Italy, would rarely find in our own country. He was evidently a man of superior intellect, as well as polished manners; and I have since conjectured that he might be a professor in the university at Padua. At length, it being now dark, our conversation declined, fatigue overpowered me, and I fell asleep. When I awoke, I found myself alone—the sole occupant of the diligence, which was no longer in motion. I looked out of the window; the moon was shining on the high walls of a vast edifice, enclosing the paved courtyard in which I thus unexpectedly found myself; the horses had been taken away—not a human being was in sight—all around was quiet and solitary. Scarcely yet restored to full consciousness. I got out of the diligence, and, passing under an arched gateway at one corner of the court, came out into the open street. Here the first object that met my eye was a magnificent palace of white marble, with a façade of perfect Grecian architecture, beautiful Corinthian pillars sustaining the extensive portico, on which the moon was shedding her softest radiance—presenting altogether such a scene as fancy conjures up in our dreams. I looked at my watch: it was near midnight. Ascending the broad flight of steps, I entered a vast and sumptuous hall, rich in marble, brilliantly lighted up, but perfectly empty. Beyond this was another equally spacious hall, similar in appearance, and lighted like the first; here were a few persons seated at small tables, and in one corner a sort of bar, or stand for refreshments. This last savored of reality; I approached and uttered the word "*cioccolata*;" this word broke the spell, and the enchanted palace seemed transformed almost to a café, when an attendant placed on a marble table a small metallic pitcher of chocolate, and some light cake. But what could this vast and magnificent palace be? And why should its halls be so brilliantly lighted at that dead hour of night? The mystery was not solved till some days after, when, returning from Venice, I found this same palace, at the

hour of two in the morning, open and lighted as before. The place was *Padua*, so celebrated for its university; and this magnificent *café* (for such it was, though unrivalled in size), is sustained by the special patronage of the students, who occupy the rooms above, and for whose accommodation, as well as that of the travellers who pass this way, to and from Venice, at all hours, it is kept open and lighted all night.

Leaving Padua, I had the whole interior of the diligence to myself, and soon fell asleep. An hour after, I awoke, looked out on the road. It lay on the bank of a canal, extending through a country perfectly level. On the opposite side of the road from the canal, the soft moonlight fell on a long succession of palaces—the country residences of the ancient nobility of Venice, each with a beautiful garden in front, and adorned with a profusion of statues, some placed on the tops of the principal edifice, others ranged along the garden walls, or disposed among the shrubbery. The great number of these statues astonished me, and as the bright moonlight fell on them, exhibiting their various attitudes, some, with the deep blue sky for the background, and others on the walls, so near that the expression of the face was distinctly visible, there was a loveliness and enchantment about the scene altogether unique. The diligence drove rapidly along, and still the same prospect continued for miles. Sleep again overpowered me, and when I next woke the palaces had disappeared, and the perfectly level road, straight as an arrow, was in view for a long distance ahead. At 3 o'clock in the morning, we arrived at a small town (*Mestre*) at the termination of the main land, where we left the diligence, and went on board a gondola for Venice, distant now but seven miles. This going out to sea in quest of a city, was something new. We soon left the narrow canal for the open water, and when the eastern sky was tinged with the first ruddy hues of morning, the domes of Venice were in full view, the city seeming to rise out of the sea. I shall never forget that view of Venice, with the crimson sky for the background, and the exulting feeling when I found myself in the vicinity of this "ultima thule" of my wanderings—at least in this direction.

At a police station, built on piles in the water, our passports were examined. Soon after, we entered the grand canal, the Broadway of Venice, lined with ancient and magnificent palaces. At the *posta*, the mails were discharged, the *conducteur* and other passengers landed, leaving only myself and two young Spaniards, who had come from Milan in the "rotonde" of the diligence, and who had in view the hotel which I had selected. It was

situated near the termination of the grand canal, where it opens into the broader channel on the southeastern side of the city; the sun was just rising, as we stepped from the gondola upon its stone staircase projecting into the water. There were but two rooms unoccupied in the house, neither of them very inviting in appearance; I took possession for the time of the one assigned me, closed the blinds, went to bed, and slept four hours. I rose at ten o'clock perfectly refreshed, took breakfast, and set off in quest of better lodgings, which I soon secured at the hotel d'Italia. Having intrusted my passport to the commissionaire, I next repaired to the *posta* (postoffice) and there, to my great satisfaction, secured a seat in a diligence which, after three days, would set off for Bologna and Florence. This done, my mind was free from all solicitude; I had nothing to do for three days, but to see and enjoy as much of Venice as possible. I strolled through its narrow streets—so narrow that with extended hands you can touch the walls on each side—and soon found my way to the grand centre of resort, the *Piazza di San Marco*. This is a spacious open square, having on one side the church of St. Mark, and on the other three sides three magnificent palaces, united at the angles, and thus forming a complete enclosure. The basements of these palaces present in front an unbroken series of arcades, occupied with numerous *cafés* and shops, affording a most delightful shelter for the crowds that daily assemble there. Under these arcades there are also, at intervals, passages to the streets in the rear. On the side of the square near the church, is the splendid *tour de l'horloge* (clock-tower) rich in marble and gilding. Two statues in bronze are conspicuous on its top, and by an ingenious piece of mechanism, these figures, called "the Moors," are seen to elevate their arms and strike the hours. This they do in a style quite like life.

The glorious old church of St. Mark, so intimately associated with every thought of Venice, is not easily described. It was begun A. D. 976, and completed in 1071. How strange do these dates sound in American ears! How indescribable are the feelings of a pilgrim from the new world, when he finds himself on the threshold of that grand and time-honored edifice, and feels that he is indeed in Venice, and amid the monuments of a national history even more remarkable than that of Rome! A handful of exiles, driven by despair to take refuge on a narrow strip of barren sand, lay there the foundations of a mighty empire; without vegetation, without drinkable water, without building materials, almost without soil on which to build, they erect a city in the midst of the waves of the sea. This state without

a territory, this city floating as it were on the Adriatic, strong only in the indomitable enterprise and invincible courage of its inhabitants, attracts to itself the commerce of the world, sways the sceptre of the seas, itself a republic, gives laws to proud empires, and grown now to colossal size, overshadowing the nations, fills the measure of its fame by that splendor in the fine arts, which to this day remains, alas! the only relic of its ancient glory. Such is the history of Venice, from its origin about the middle of the fifth century, to the extinction of its independence in 1796.

Some idea of the sumptuous architecture of the church of St. Mark may be formed from the fact that the number of pillars of marble, porphyry, verd-antique, etc., within and without, is not less than 500. Bronze, gold, and mosaics, everywhere meet the eye. Just in front of the principal entrance, the spot where the reconciliation took place in 1177 between Pope Alexander III. and the emperor Frederick Barbarossa, is indicated by some pieces of red marble in the pavement.

Close to the church stands the doge's palace, an edifice as grand and imposing in its architecture, as it is interesting in its historical associations. It occupies one side of the *piaz-zetta*, a small square, which extends from one angle of the place of St. Mark to the water, the two quadrangles together resembling in shape the letter L. This palace was built near the middle of the fourteenth century, when Marino Faliero was doge of Venice. Entering the principal gate, and crossing the interior court, you ascend the celebrated giant staircase, so called from its being ornamented with two semi-colossal statues of Mars and Neptune—emblems of the military and naval power of the republic. Just at the head of this staircase the doges were crowned, and this same spot, Byron, following tradition, has represented as the scene of the execution of Marino Faliero.

The doge's palace is preëminently the place to which the stranger must resort in order to feel the full impression of the past—whose memorials here surround him. Its vast and numerous halls are filled with historical paintings, picturing to the eye all those scenes and transactions which are associated with Venetian glory. In one of these is a series of geographical paintings, delineating the different countries discovered and visited by the Venetians, in the proudest days of the republic. Of the numerous pictures in the different halls, those interested me most which most vividly depict her ancient power and splendor; such, for instance, as that of the doge Cicogna, receiving the Persian ambassadors—Pope Alexander III. advancing to meet the doge Sebastian Ziani, returning from his victory over

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Frederick Barbarossa—the pope presenting a sword to the doge, as he embarks—the return of a doge after his victory over the Genoese—the doge Henry Dandolo (who, at the age of 97 years, and blind, led the Venetians to the capture of the ancient Byzantium) crown- ing the emperor Baldovino at Constantinople—the doge, surrounded by his council, re- ceiving the deputations of cities offering them- selves as voluntary subjects of the republic— numerous battles of the Venetians, etc. To gaze on these paintings, most of them the works of great masters—to feel that you are standing on the very spot where many of these memorable scenes occurred—to look out from the windows of the palace on the mole where the embarkation depicted on the canvass took place—to repeople in imagination the quiet squares beneath you, where in the heat of the day but a few loungers are seen, with those exulting throngs that crowded in past ages to these grand demonstrations of Venetian glory—these are things that take powerful possession of the soul, and cause it indeed to live in the past. Never before had I so felt the power of historical painting.

The portraits of one hundred and fifteen doges extend along the upper part of more than one hall. In the place where should have been that of Marino Faliero, is this inscription on a black ground—"Hic est locus Marini Falierii decapitati pro criminibus." The ef- fect of this is most impressive.

On the place of St. Mark stand three lofty flag-staffs, resting on richly ornamented pedes- tals of bronze. From these were once dis- played the standards of the republic, indicating her dominion over Cyprus, Candia, and the Morea.

The *campanile*, or tower of St. Mark, is an isolated square tower near the church. From the top of it I gazed with no common delight on the beautiful city below, the neighboring islands, the blue waters of the Adriatic, and the distant mountains of the Tyrol. When this glorious panorama was spread out before me, beneath that cloudless sky, I felt sure that no city in Italy, no one in the world, could rival the perfect enchantment which its scenery and its history impart to Venice.

The contrast between the past glory and present decay of this renowned city is exceed- ingly impressive. Yet, politically and com- mercially unimportant as she now is, there are many things which to the stranger materi- ally diminish the painful sensations which such a contrast is fitted to produce. The en- doring glories of architecture, statuary, and painting, still remain, though the sceptre of power and pride has departed from Venice. There appear to be, also, far more industry and general comfort here, than in most of the

other Italian cities. Not only are the crowds that congregate in the evenings at the piazza and piazzetta, well dressed and genteel in ap- pearance, but the lower class generally appear in better circumstances than elsewhere in Italy.

As there were no excursions to be made out of the city, three busy days sufficed for very extensive rambling through its narrow streets, as well as for repeated visits to the objects of greatest interest. A connoisseur in the fine arts would indeed wish to spend weeks or months here, but for those who are not so, it is perhaps the best policy to compress in as small compass as possible the pleasure of visit- ing such scenes, and to leave them before they have even begun to pall on the sense. To me, Venice will ever be enchanted ground, and the glimpse I had of its glories, brief as it was, yet sufficient for vivid impression and enduring remembrance, was a chapter of the purest poetry of life. It might have degen- erated into prose, had I stayed long enough to associate it chiefly with every-day occurrences and commonplace companions. It so happen- ed that here I was absolutely without acquaint- ances, and except at the *table d'hôte* of the hotel, had little occasion to hold intercourse with any one; and I was precisely in that mood of mind in which this circumstance was most delightful. The objects around me were eloquent, and I would on no account have had the effect of their eloquence frittered away by ordinary chit-chat. The gorgeous architecture of those time-honored palaces and temples, and the memory of the stirring events with which many of them are associated, furnished inex- haustible food for that delicious revery, to which the voluptuous softness of the air, and the repose of all nature beneath that cloudless sky, seemed of themselves to invite.

Venice is built on about seventy small islands, separated from each other by a great number of canals. The number of bridges crossing these canals is said to be three hundred and six. Even in Amsterdam there are wide streets traversed by light vehicles, and, since the opening of the railway, by one or two omnibuses; but in Venice, not a horse or car- riage of any kind is to be seen; the narrow streets, and the bridges, often at an elevation reached by stone steps, are adapted exclusively to pedestrians. Besides the spacious squares (the *piazza* and *piazzetta*), adjoining each other, near the church of St. Mark, there are few public places large enough for general re- sort, and accordingly, these constitute the chief promenade.

The grand canal, far exceeding the rest in width, winds its serpentine way through the city, dividing it into unequal parts. There is but one bridge over it, the celebrated *Rialto*,

which thus connects the two groups of islands on which the city is built. A double range of shops extends over this bridge, dividing it into three parallel streets, generally filled with a gay and laughing throng. The Rialto makes also a fine appearance from the water, being built of stone, and spanning the canal by a single high arch, beneath which the black gondolas are passing and repassing continually.

The churches of Venice are magnificent in architecture and sumptuous in their decorations, enclosing a great number of paintings by the first masters, and many of them containing vast sepulchral monuments of most elaborate sculpture, in memory of the doges and distinguished nobility of former years. Those erected in honor of distinguished artists are still more attractive, especially from the juxtaposition of *chefs d'œuvre* which will perpetuate their fame. In the church *S. Maria dei Frari*, I paused for a long time at the monument to Canova, erected in 1827. Its magnificent sculpture is the result of the labors of seven of the most distinguished living Venetian artists, after a model designed by Canova himself for a sepulchral monument to *Titian*, who lies interred in the same church, and to whom a monument, just opposite to Canova's, is not yet completed. That to Canova is a pyramid of white marble, with exquisitely sculptured mourning figures ranged on steps leading to a door, representing the opening to a sepulchre. An account of the last hours of Canova which I had read some years previous, made my visit to his tomb exceedingly interesting. I thought of him as one whose love for the beautiful had not been limited to material forms—whose soul had imbibed a pure and elevating influence from communion with ideal excellence. A peculiar purity and chasteness characterize his works, and are nowhere more conspicuous than in his celebrated *Venus*, which I saw afterward at Florence.

Of the churches which I visited, except *St. Mark's*, none seemed to me to surpass that of *Santa Maria della Salute*. This gorgeous edifice was built by the republic, then in its highest glory, in fulfilment of a vow made on occasion of the plague which in 1630 swept off thousands of victims. It stands in a conspicuous place not far from *St. Mark's*, on the opposite side of the grand canal, just where the latter opens into the broad channel. It is most profusely ornamented, comprising no fewer than one hundred and twenty-five statues, besides numerous celebrated paintings, and is surmounted by a magnificent dome.

Not far from this church, on the same bank of the grand canal, is the academy of fine arts, containing a rich collection of paintings, chiefly of the Venetian school. The two paintings

here that interested me most were the Resurrection of Lazarus, and the Death of Rachel. In the latter of these, the beautiful face of her who lies extended on the couch—the deep grief of Jacob as the wife of his love is expiring—the attitude of Joseph, and the infant in charge of the nurse—make up a scene inexpressibly touching.

As an omnibus ride after dinner was not to be had in Venice, I took, as an excellent substitute for it, an excursion in a *gondola*. Setting off near the place of *St. Mark*, the gondolier proceeded leisurely along the canal, giving me time to admire the palaces on its banks, till, at some distance beyond the ponte Rialto, by one of the numerous canals opening to the right, we passed through to the shallow water on the northern side of the city. The sun was setting when we reached this point, and the view was most enchanting. Passing by the arsenal, whose strong walls, flanked by towers, enclose a space nearly two miles in circumference, I stopped a few minutes at the public gardens. When I left the gondola, the full moon was shining on one of the loveliest scenes that can well be imagined. The place of *St. Mark*, and the adjoining square which fronts on the broad channel, were now filled with promenaders. Hundreds of chairs in front of the cafés were occupied by parties of ladies and gentlemen, refreshing themselves with ices and lemonade, and occasionally serenaded by musicians of both sexes, who, after their song was ended, collected a moderate tribute from the audience. In one of the cafés I took up a Paris newspaper which discussed at some length the question, who would be the next president of the United States. It seemed strange to read of "*Monsieur Webster de Boston*," and "*Monsieur Clay de Kentucky*," under the shadow of the doge's palace at Venice.

The following evening was the last of my stay. At eight o'clock it was necessary for me to be at the posta. In compliance with the usual requisition, my baggage had been sent some hours before, I had settled my bill at the hotel, and received the courteous farewells of my landlord, whose English "good-by" had a very kindly sound, when superinduced upon his customary French.

Once more, and for the last time, I stood in the piazza, and yielded to the full inspiration of the place and the hour. Every beautiful object was more beautiful beneath the moonlight, and, to heighten the enchantment of the scene, the band of music connected with the Austrian garrison, numbering at least eighty musicians, with a great variety of instruments, formed a hollow square in the place of *St. Mark*, and gave a magnificent serenade. To listen to those strains under the shadow of the

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church of St. Mark and the doge's palace,
 was alone sufficient to compensate a pilgrimage
 to that distant city. Reluctantly I tore my-
 self away from this enchanted ground, and
 hastened to the posta, where I arrived just in
 time. The mail-boat, which waits for no one,
 had received nearly all its passengers, and two
 minutes after I stepped on board we were in
 motion.

Thus I parted from Venice. But there is,
 indeed, "no farewell" to such scenes. Neither
 Florence, in the beautiful and classic vale of
 the Arno, nor smiling Naples, with its un-
 rivalled bay, nor Rome itself, with all its
 solemn grandeur, distinct and vivid as they
 are in recollection, has power at all to dimi-
 nish the charm which memory throws around
 that unique and most lovely city, whose moon-
 light scenery still mingles with the most deli-
 cious of my waking dreams.—*Rev. W. C.*
Dana.

VEGETABLE CURIOSITIES.

THE vegetable kingdom has often supplied
 the natural theologian with the most striking
 and forcible of his illustrations, in proof of
 the lavish goodness of the Creator. He has
 seen in its varied productions, the exhaustless
 skill of the All-creative hand; in the adapta-
 tion to the wants and necessities of man, his
 wisdom; and in the gratifications they present
 to his eye, and to his taste, the clear evidence,
 that, while utility has been amply regarded,
 the enjoyment of the creature has been equally
 remembered, and abundantly provided for.
 With the most of the utilitarian products of
 this kingdom, we are sufficiently familiar;
 but with regard to its more exquisite gifts, we
 believe a good deal of ignorance to prevail,
 which it will be our endeavor, though imper-
 fectly, to dissipate.

The Rev. Dr. Walsh, in a paper upon
 plants, growing in the neighborhood of Con-
 stantinople, contained in the "Horticultural
 Transactions," speaks in an interesting man-
 ner, of several of the gourd tribe, which
 grow luxuriantly in that district. One of the
 curious varieties was the *cucurbita clavifor-
 mis*, or "Jonah's gourd," which is believed to
 be really that plant, which was caused to
 grow up over the head of the prophet in a
 single night. It forms a beautiful dense ar-
 bor, through which the rays of even the east-
 ern sun are unable to penetrate; under its
 shade the Easterns delight to smoke; while
 overhead, the singular fruit of the plant
 hangs down in long, delicate, tempting clubs,
 somewhat like very stout candles. The fruit

is not eaten in the uncooked state: but the
 central part being scooped out, it is filled with
 forcemeat, and boiled, forming a very delicate
 and reliable repast. Another remarkable
 gourd is the "Turk's turban," the *cucurbita*
cidariformis; in form, it is like a large quince
 placed on the top of a large melon, thus bear-
 ing a pretty close resemblance to a turban.
 The history of its origin is curious, and more
 "wonderful than true," as we fear. A gourd
 was planted in Campania, near a quince, and
 an affection apparently springing up between
 the two, the gourd came to the conclusion of
 adopting the form of the quince, in addition to
 its own glossy rotundity, and the result was
 the form we have just noticed. It is used as
 an excellent addition to soups. Another spe-
 cies is the white, or *cucurbita pepo*; this is
 found in the markets principally in the winter,
 and is commonly piled up in heaps, like can-
 non-balls, or more like pyramids of snow-
 balls. Romantic associations attach to this
 chaste production; it is presented at every
 native marriage ceremony to the married pair,
 and is supposed to insure peace and prosperity
 to them and to their house. The *momordica*
elaterium, a member of the same family, is
 otherwise known as the "squirting cucumber,"
 from its possessing the strange property of
 squirting out its contents, on one of the ends
 being pulled or touched. It is a common
 piece of gardener's wit, to request one to take
 hold of the dangerous end, and if we consent,
 the face and person are covered with the acrid
 slimy contents of this vegetable popgun.
 Where the plant grows in abundance, they
 may be heard popping off frequently; and by
 simply walking near these irritable instru-
 ments, the passenger is often shot in the eyes
 with great force by them. Some of this tribe
 occasionally reach an enormous size, particu-
 larly the mammoth or American gourd. Among
 many examples, one is specially recorded as
 having attained the colossal weight of two
 hundred and forty-five pounds! a size truly
 monstrous.

Among delicious fruits, the tree known as
 the "tomberong," produces small berries of a
 yellow color, and exquisite flavor. These are
 highly esteemed by the natives, who convert
 them into a beautiful sort of bread, which,
 curious to relate, in both color and flavor bear
 the closest resemblance to our finest *ginger-
 bread*. A tree belonging to the natural or-
 der *Assocynaceæ* produces a fruit called the
 "cream-fruit," which is estimated by some,
 as being the most exquisite fruit in the world.
 Two are always united together, and they de-
 pend from the extremity of a small branch.
 When wounded they yield a quantity of white
 juice resembling sugar or the best milk in its
 taste. For allaying the thirst incident to a

tropical climate this fruit is invaluable; and its delicious quality gives it an appropriate estimation in the eyes of the weary traveller in those regions. Of another curious fruit produced by one of the same tribe, Dr. Lindley writes: "The sages of Ceylon, having demonstrated, as they say, that Paradise was in that island, and having therefore found it necessary to point out the forbidden fruit of the garden of Eden, assure us that it was borne on a species of this genus the *Divi Ladner* of their country. The proof they find of this discovery, consists in the beauty of the fruit, said to be tempting in the fragrance of the flower, and in its still bearing the marks of the teeth of Eve. Till the offence was committed, which brought misery upon man, we are assured that the fruit was delicious; but from that time forward it became poisonous, as it now remains." The fruit of another tree, of the same species affords a capital substitute for red currant jelly, and one of the celebrated "cow-trees," inhabitants of equatorial America, belongs to this natural order also. The delicious custard-apples of the East and West Indies are produced by the *Anona reticulata*. It is a small, weakly, branching tree, bearing fruit about the size of a tennis-ball, which is of a dull-brown color. The flesh is said to be of a yellowish color, soft and sweet, being about the consistence, and sharing even much of the flavor of a good custard. Another variety, is a small tree, which bears a fruit of a greenish yellow color, and is the size of an artichoke, called the "sweet sop." The skin is half an inch thick, and encloses an abundance of a thick, sweet, luxurious pulp, tasting like clouted cream, mixed with sugar. Rumphius says, that it has in some degree the smell and taste of rose-water, and is so delicious, that one scarcely ever tires of partaking of it. It has a complete contrast in the "sour sop," which belongs to the same species, which is a fruit, of the size of a large pear, abounding in a milk-white pulp of a sweetish acid taste. Sir Hans Sloane, in the "Natural History of Jamaica," particularly mentions the alligator, or avocado pear, the product of one of the lacereles; the fruit is the size of a large pear, and possesses a rich delicate flavor, not unlike that of the peach; but it is described as being even more grateful. Another curious fruit is that called the "mammee;" it is round and yellow, and when ripe, the rind peels off, discovering the eatable part, which has an acidulo-saccharine taste, and is of great fragrance. The tree by which it is borne reaches the size of the largest of our oaks.

Those who are admirers of marmalade (and we expect a vast number of our readers are guilty of that indiscretion) will learn with

some surprise that nature presents the inhabitants of Surinam, with the little ready concocted. The fruit is called the "marmalade box." It is about the size of a large apple, and is covered with down. At first it is green, but when ripe it becomes brown, and then opens into halves like a walnut; the pulp is of a brownish color, very sweet and tempting, and is eaten by the natives with the greatest avidity. The Brazilians boast also of a delicious fruit, the *murucuja*, said to be unsurpassed in fragrance and flavor, possessing a pulp of a deep yellow, and exhaling a fine vinous odor. Yet it must yield to the far-famed mangustin of the Indian archipelago. This exquisite production is universally esteemed, and is alike agreeable to strangers as to the inhabitants of its native country, whose pride it is. In shape and size it is like a middling apple; it has a thick purplish rind, which surrounds three or four cloves of snow-white pulp, which almost immediately dissolve. The flavor is extremely rich, yet never luscious, nor palls on the taste; and the fruit may be eaten almost *ad libitum*. Dr. Lindley says that an intelligent traveller and his companions, were anxious to bring away with them, some precise expression of its flavor, but after satisfying themselves that it partook of the compound taste of the pine-apple and the peach, they were obliged, after of course a series of tastings, to confess that it had many other equally delicious, but utterly inexpressible flavors. Not only is it grateful to the strong and hearty, but even to the sick, who may eat it with impunity; and, as if to swell the list of its good attributes, it is related that Dr. Solander was cured of putrid fever by eating it. A more singular, and at first a most uninviting fruit, is the "durian;" it combines in a remarkable manner an odor the most disgusting and offensive—creating an almost insuperable aversion to the fruit—with a very rich and delicate taste. The tree is described as being something like a pear-tree; the fruit externally resembles that of the "bread-fruit" tree, the outside being covered with tubercles. When ripe, it contains several cells, in each of which is a large seed of the size of a pigeon's egg, imbedded in a rich pulp. The taste is very curious, and has been compared to a dish commonly known in Spain, under the name of "*mangiar blan*," composed of hen's flesh dressed in vinegar. The fruit really appears to partake more of an animal than vegetable nature, and never becomes sickly or cloying. The natives are passionately fond of it, and when it is to be procured, live almost wholly on its luxurious cream-like flesh. It is said soon to turn putrid. One durian is worth more than a dozen pine-apples.

The rose-apples of the East, have long been

that nature presents the inhabitant, with the little ready-consumable fruit called the "marmalade" but the size of a large apple, and when down. At first it is green, and it becomes brown, and then it is like a walnut; the pulp is of a color, very sweet and tempting, and the natives with the greatest of Brazilians boast also of a delicate *murucuja*, said to be unsurpassed in fragrance and flavor, possessing a deep yellow, and exhaling a fine perfume. Yet it must yield to the far-famed production of the Indian archipelago, which is universally acknowledged to be agreeable to strangers as well as to its native country, whose shape and size it is like a mildew, it has a thick purplish rind, and is divided into three or four cloves of snow-white, which almost immediately disappear, and the flavor is extremely rich, yet never oppressive to the taste; and the natives eat almost *ad libitum*. Dr. J. C. Smith, an intelligent traveller and naturalist, was anxious to bring away a precise expression of its flavor, and satisfying themselves that it partook of the compound taste of the pine-apple, they were obliged, after a series of tastings, to confess that it was equally delicious, but utterly different in flavor. Not only is it grateful to the palate, but even to the sick, and it is with impunity; and, as if to prove its good attributes, it is related that a patient was cured of putrid fever by its use. A more singular, and at first a surprising fruit, is the "durian;" it is remarkable in manner of odor, being strong and offensive—creating an insupportable aversion to the fruit—with a delicate taste. The tree is described as being something like a pear-tree; externally resembles that of the "fig" tree, the outside being covered with thorns. When ripe, it contains several seeds, each of which is a large seed of a pigeon's egg, imbedded in a rich, creamy substance, and has been described as a dish commonly known in Spain, under the name of "*mangiar blan*," composed of the fruit dressed in vinegar. The fruit is said to partake more of an animal nature, and never becomes putrid. The natives are passionately fond of it, and when it is to be procured, they are wholly on its luxurious cream-like substance, said soon to turn putrid. One of the most curious pine-apples, known to the East, have long been

held in esteem, and take a high position among the elegant delicacies of nature. In all respects, this fruit is a lovely production; it is borne by a tree called the jambo; it is about as large as a pear; externally, it is arrayed in a coat of the most splendid red; inside, its pulp is of the loveliest white; and in perfume and taste it much resembles the rose. Some varieties of the rose-apple are so fine, as to be preserved for the king's use alone: a beautiful variety, the jamrosade, is most highly perfumed with rose, while its color is a delicate transparent pink mixed with white. The well-known guava, is a fruit belonging to the natural order—the myrtleblooms. One of the chief delicacies of the Indian desert, is the fruit of the mango, the offspring of a considerable tree like a walnut. When fresh, it is of an exceedingly delicate, sweet, and acidulous flavor, and forms pickles and preserves, which are highly esteemed. Some of its varieties are as large as an infant's head, and exceed two pounds in weight. Sir William Jones, in the "*Asiatic Researches*," mentions a very delicious fruit, known as the malura, which is curious in consequence of its possessing a fragrance strongly resembling that of the wall-flower.

The Chinese horticulture has long been famous for its productions, some of which are very anomalous. Marco Polo says, they have some pears of most gigantic sizes; pears are at all seasons in the Chinese markets, and some appear to have been fattened up to a degree of obesity that would do good to the eyes of an agricultural prize-breeder. What would be thought in England, of a pear weighing ten pounds, therefore, somewhat of the size of a Southdown leg of mutton! Yet such this industrious traveller affirms as a fact, adding that they are white in color, melting, and most fragrant in taste. Other authors mention pears of approximate sizes, some measuring nearly sixteen inches in circumference the long way, and upward of a foot the round way. Their peaches, too, are equally fine; many of them are of the most beautiful colors and exquisite flavor, and some attain enormous sizes. The Chinese gardeners boast of having produced peaches weighing two pounds; and it is not for us to doubt their assertion, although we know somewhat of the elasticity of the Chinese conscience. They are also said to be possessed of the valuable secret of preserving fruit gathered in October until the succeeding January, in all its beauty, freshness, and flavor. Among other fruits, the "flat peach," well deserves the title of a horticultural curiosity. It is in all respects like a peach, except that it is flattened out into a cake; this fruit is well known at Canton; its color is a pale yellow; when cut into, a

beautiful circle of pink is seen surrounding the stone, and radiating into a mass of delicately-colored pulp. In the indulgence of their dwarfing propensities, they manufacture for such it is, miniature fruit-trees of various kinds, by the method now become familiar to most persons. Large sums are set on the heads of those diminutive trees, in proportion to their ugliness and their abundance of fruit. Venerable old plum-trees, a foot high, laden with fruit, are without a price; while finger-fruits, marygoes, peaches, carambolas, and grapes, come in for subordinate attention. The beautiful orange, the "mandarin," (*Citrus nobilis*) one of the recent importations into this country, is remarkable for having a deep crimson rind when ripe, which is quite detached from the fruit. "The whole," writes Sir J. F. Davis, "has a flattish aspect, and is sometimes four or five inches in diameter; and the loose skin, when broken, opens like a puff-ball, disclosing the juicy lobes surrounded with a kind of network of fibres." The celebrated finger-fruit comes very manifestly into our category, and is a curious result of an ingenious horticulture. It is a peculiar kind of citrus, which by some means or other, is made to run entirely into rind, the whole terminating at the head in several long narrow processes like fingers: it has hence been named, "Finger-show," or the hand of Fo. Its odor is very powerful, but is considered as very fine. "So entirely, however, is this strange production the result of art, operating upon nature, that it does not appear a second time after the plant had been purchased." The Chinese have also some curious oranges, known as the horned oranges, from the circumstance of a number of little horn-like processes projecting from its upper end. It may be mentioned in connexion with these plants, that the productiveness of the orange, is something quite enormous. A single tree at St. Michael's has been known to produce 20,000 oranges fit for packing, exclusively of about one third more of damaged fruit. Mr. Fortune supplies a curious account of the production of "vegetable tallow." The seeds of the tallow-tree, after having been steamed and bruised, are heated over the fire; the tallow is thus completely separated, but it looks like coarse linseed-meal; subjected to expression, it exudes in a semi-fluid state, and beautifully white, soon hardening, and becoming solid. It is then made into cakes, and exposed for sale in the markets, for the manufacture of candles; but as these are apt to get soft, they are often dipped in wax of various colors, and sometimes are finely ornamented. But this is a subject with an unconquerable tendency to expansion: let us therefore, having gone thus far, take a hasty leave of it at once.

MEMOIR OF LOUIS PHILIPPE.

THE ex-king of the French was born in Paris, October 6th, 1773, and consequently is now in his 75th year. He succeeded to the title of duke of Orleans in 1793, after the death of his father, Philippe Egalite, who, it is well known, suffered by the guillotine in the sanguinary days of the revolution. The Orleans branch of the Bourbon family, of which Louis Philippe is now the head, originated in Philippe, a younger son of Louis XIII., created duke of Orleans by his elder brother, Louis XIV. The first duke of Orleans was twice married, his second wife being Elizabeth Charlotte, of Bohemia, grand-daughter of James I., of England; thus connecting the houses of Orleans and Stuart, from the latter of whom the queen of England, Victoria, is descended.

For many years, Louis Philippe was exiled from France, travelling in various countries of Europe, and visiting the United States in his exile. While in Switzerland he engaged as a teacher in an academy for eight months, being then twenty years of age. It is a mistake, however, that he ever taught school in the United States, as is generally supposed.

He arrived in this country in November, 1796, and was joined by his two brothers, the three spending some time with General Washington, at Mount Vernon, by invitation, previous to making a journey through the western country. After a tour to the lakes and the falls of Niagara, the princes returned to Philadelphia, where they resided a few months. Having determined to join their mother in Spain, the princes determined to go thither by way of New Orleans and Havana. For that purpose they again crossed the mountains of Pittsburg, and descending the Ohio and Mississippi river in a boat, arrived at New Orleans in February, 1798. Being refused a passage to Spain from Havana, whither they went from New Orleans, they sailed to New York, whence an English packet carried them to Falmouth, at which place they arrived in February, 1800. The princes then took up their residence on the banks of the Thames, at Twickenham. They received much attention from the English nobility. They made a voyage to the island of Minorca, a passage being given them in a frigate by the British government; but finding no opportunity of passing thence to Spain, which was then in a convulsed state, they returned to England, and resided for some years at Twickenham. The duke of Orleans had the misfortune to lose both his brothers while in exile. The duke of Montpensier died in England, in 1807, and his remains were interred in Westminster

abbey. The Count Beaujolais died at Malta, whither his brother accompanied him in 1808.

From Malta, Louis Philippe went to Sicily, and accepted an invitation from Ferdinand, the king of Sicily, to visit the royal family at Palermo. During his residence there, he gained the affections of the Princess Amelia, the second daughter of the king, and the consent of Ferdinand and the duchess of Orleans, who had joined her son in Sicily, their marriage took place in November, 1809. By this lady, late queen of the French, Louis Philippe has had eight children, of whom six still survive, viz.:

1. Louise, queen of Belgium (wife of Leopold), born 1812.
 2. Louis, duke of Nemours, born 1814, married Victoria Augusta, of Coburg, cousin of Prince Albert.
 3. Maria Clementina, born 1817, unmarried.
 4. Francis, Prince de Joinville, born 1818, admiral of the French navy, married Francisca, a sister of the emperor of Brazil, and of the queen of Portugal.
 5. Henry, Duke d'Aumale, born 1822, married to Carolina, cousin of the king of the Two Sicilies.
 6. Anthony, duke of Montpensier, born 1824, married a sister of the queen of Spain.
- The oldest son of Louis Philippe was Ferdinand, duke of Orleans, born 1810, killed by jumping from his carriage, July, 1842. He married in 1837, Helena, daughter of the grand-duke of Mecklenburg-Schwerin—by whom he had two children, viz., Louis Philippe (count of Paris) born 1838, and now ten years of age, and Robert Philippe, duke of Chartres, born 1840.

At Palermo, Louis Philippe remained after his marriage, until 1814, when on the restoration of the Bourbons, he repaired to Paris, and was restored to his rank and honors. The return of Napoleon from Elba, in 1815, broke up his arrangements, and he sent his family to England, where he joined them, and again took up his residence at Twickenham.

On the restoration of Louis XVIII., the duke returned to France, in September, 1815, and took his seat in the chamber of peers. The large estates to which he was entitled by inheritance being restored to him, he devoted his attention principally to the education of his family. His opulence enabled him to become the protector of the fine arts, and the patron of letters, and few men in France were more popular during the career of the Bourbons. He was unexpectedly called from private life by the revolution of the three days in July, 1830, when, on the abdication of Charles X., the chamber of deputies offered him the crown, which he accepted on the 9th of August,

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1830, and adopted the style and title of *Louis Philippe, king of the French*.

The ex-king was a handsome man when young; his frame is now bulky, but there is much ease in his manners. He is ready in conversation, and was always remarkable affable to all.

Besides the young count of Paris, grandson to the ex-king, there are two other claimants to the French throne at this time, namely: first, the young duke of Bordeaux, son of the Duke de Berri, and grandson to the late king, Charles X., who was the elder branch of the Bourbon family, and brother of Louis XVI. and Louis XVIII. Charles X., it will be recollected, was deposed in 1830.

Second, Louis Napoleon, son of the late Louis Bonaparte, who was for awhile king of Holland. The mother of this prince was Hortense, daughter of Josephine, first wife of the Emperor Napoleon.

The claims of neither of these two princes seem to be worth much now; the only chance, if a republic be not permanently established, is probably for the young count of Paris, under the regency of his mother, the duchess of Orleans, who is now thirty-four years of age.

In connexion with the preceding article we present our readers with some very interesting details respecting the flight of the ex-king and queen of the French, and their safe arrival and sojourn at Newhaven, England. The accompanying engravings were made by artists on the spot, and may be depended upon for correctness.

A farmer procured disguises for the royal party previously to leaving the chateau at Dreux, the king habiting himself in an old cloak and cap, having first shaved his whiskers, discarded his wig, and altogether disguised himself so as to defy recognition. Long before daylight, they started on their way to La Ferte Vidame: taking the road of Evreux, twelve to fifteen leagues from Honfleur. They travelled chiefly by night, and reached Honfleur at five o'clock on Saturday morning. They remained at Honfleur, in the house of a gentleman whom the king knew, for a short time, and then crossed to Tronville, a short distance from the town. It was their intention to embark at Tronville, but owing to the boisterous state of the weather they were compelled to remain at the latter place two days, when finding they could not set sail, they returned to Honfleur, with the intention of embarking at that place; but the sea still continued very rough, and the king fearing that the queen in her exhausted condition would be unable to bear the fatigue of a rough passage, deferred his departure till the weather changed on Thursday. In the meantime information was secretly conveyed to the *express*, South-

ampton steam-packet, that they would be required to take a party from Havre to England.

On Thursday afternoon, the gentleman who sheltered the dethroned monarch and his consort at Honfleur, engaged a French fishing-boat to convey the party from Honfleur to Havre; and, fearing that in his small vessel the features of the king might be recognised, the gentleman engaged an interpreter to interpret French to the king, who, to render his disguise more complete, passed as an Englishman. Nothing of moment transpired on the passage to Havre where the *express* was waiting with her steam up; and at nine o'clock on Thursday evening, the royal fugitives and suite set sail for England.

A little before seven on Friday morning, the *express* steamer arrived off Newhaven harbor. Here she lay to, and her commander, Captain Paul, pulled off for shore in a boat with General Dumas, who proceeded to the bridge inn, to bespeak accommodation for the voyagers. Having made due arrangements, he started for London, leaving the hostess in perfect ignorance as to the rank of her expected guests. The captain returned to his ship shortly after. About eleven o'clock a boat pulled up to the shore, containing an elderly gentleman attired in an old green blouse and travelling-cap, and a rough great coat; a lady of similar age, plainly dressed in a black bonnet, and checked black and white cloak, attended by a young female; and three other persons.

The royal party having landed, were conducted by Mr. Sims the distance of two hundred yards, where a fly was in waiting, into which the king and queen, with the female attendant, had stepped, and were about to proceed, when Mr. Sims involuntarily betrayed his recognition, and exclaimed "Welcome to England, King Louis Philippe! welcome, welcome!"

The party were then conducted by Mr. Sims to the Bridge Inn, where every preparation had been made by Mrs. Smith to secure the comfort of her anticipated but unknown guests. The truth, however, was immediately disclosed, and the worthy hostess, her daughter and assistants, confirmed the welcome which had already been pronounced, and conducted the royal exiles up-stairs. On reaching their apartment, the emotions of the worn-out and harassed travellers overpowered them, and found vent in a flood of tears.

The accommodations of the Bridge Inn are not so limited as has been stated. The royal party, which consisted of seven persons, occupied two sitting and six bed-rooms, independent of a large room sixty feet in length which was appropriated to the attendants. The sitting-room occupied by their majesties is



The Bridge Hotel, Newhaven.

about twenty feet long by fifteen wide, having a large bow window, affording additional space.

The news of the royal arrival soon spread among the inhabitants. Immediately on receiving the intelligence, Mr. Catt, of Bishopstone (who had the honor of an introduction to Louis Philippe at the Chateau d'Eu some two years ago), repaired to the Bridge Inn. The king at once recognised Mr. Catt, and received his congratulations on his escape with much emotion, shaking hands with him with great *empressement*, and expressing the most undisguised pleasure at meeting with him. In the course of conversation the ex-king exclaimed, "Ah, Mr. Catt, we have had a fearful time of it. We have been eight days in flight, and have been, it may be said, within two hours of being murdered. But, thank God, here we are safe on your hospitable shores." He also added, "It is not the first time, Mr. Catt, that I have experienced the generous hospitality of England. I am always proud to come to England." On Mr. Catt proffering the use of his house, Louis Philippe declined the offer, expressing his thanks, but observing, "The good people of the inn have done everything to render us comfortable, and we shall do extremely well." Mr. Elphick and Mr. Cole had, in a like spirit, both volunteered to place their residences at the disposal of the king and suite.

The royal party comprised, in addition to the king and queen, a female German attend-

ant on her majesty, a confidential valet, a private secretary (M. Pauline, *officier d'ordonnance*), and two other gentlemen. Considerable secrecy was at first observed as to the names and rank of the retinue, who, however, have since proved to be Generals Dumas and Rumigny, M. Thuret, the king's private valet, and Mlle. Muser, attendant on the queen.

We omitted to state that in the interview with Mr. Catt, his majesty inquired for Mr. Packham, and finding that he was at Brighton, expressed his joy that he was safe in England, and his wish that he should be sent for, which was accordingly complied with.

One of the first steps taken by Louis Philippe after his arrival at the inn was to write a letter to her majesty Queen Victoria, which he entrusted to Mr. Irons (the active secretary of the Brighton railway and continental steam-packet company), who had waited on him, and offered, on behalf of the company, every facility of transit. Mr. Irons immediately started on his mission: leaving directions in passing through Lewes, that a special train should be sent down to Newhaven, to be placed at the disposal of the royal exiles.

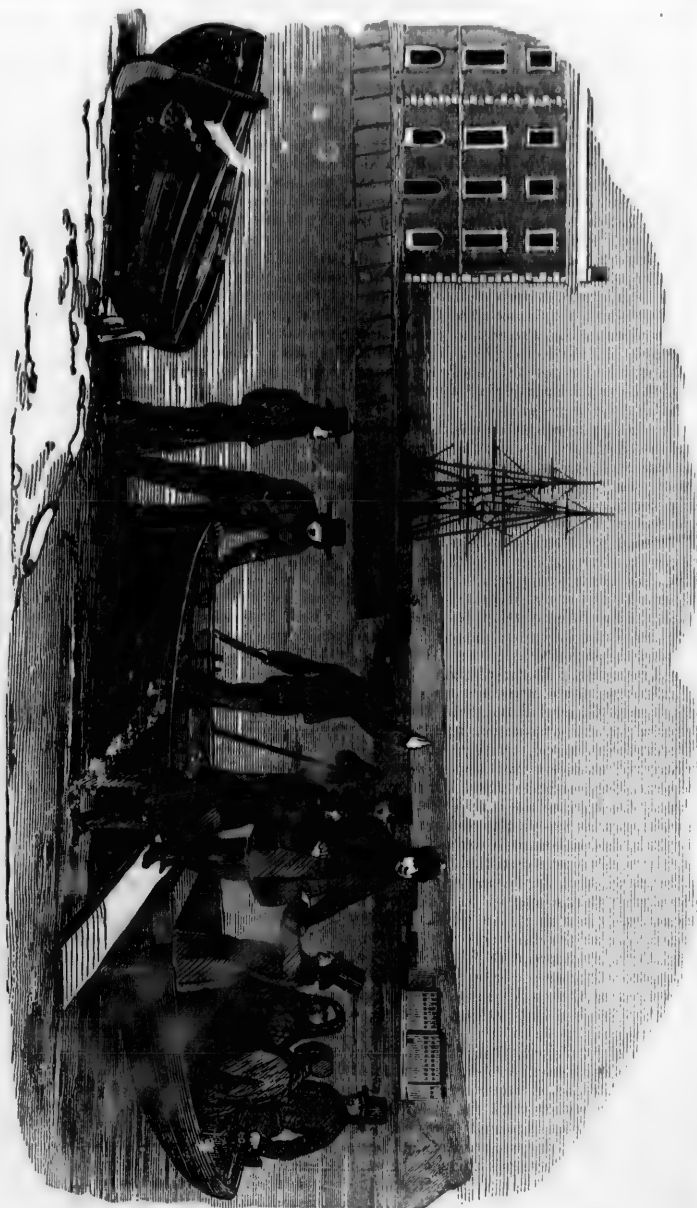
In the course of the morning, several of the inhabitants at Newhaven paid their respects to his majesty, and offered their services in various ways. On Mr. Packham's arrival, he was charged to proceed to Brighton, in order there to repair the deficiencies of the royal wardrobe; "for," said the ex-monarch pithily

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Louis Philippe landing at Newhaven (England).



to Mr. Packham, "we are very short of clothes." The king also handed over to him several bags of silver coin, for the purpose of getting it changed into English money.

In the course of the afternoon the editor of the *Sussex Advertiser* was honored with a private interview with Louis Philippe and his august consort. "We found," says the editor, in his journal of Tuesday, "Louis Philippe dressed plainly in black, without his wig, and looking cheerful and refreshed. The queen, however (who was sitting at a side table), appeared much worn and fatigued. The ex-king intimated his wish that the names of his attendants should not transpire, observing how desirous he was not to compromise in the eyes of their countrymen those faithful friends who had exposed themselves to danger for his sake in the hour of peril and need. In this feeling the queen shared.

"In alluding to recent events, his majesty pointedly disclaimed any feelings of animosity or resentment against those who had helped to hurl him from the lofty position he had lately occupied. His observations on this point were made with a calm and dignified composure of voice and manner, which certainly gave the strongest impress of sincerity and truth. Without attempting to exculpate either one party or the other, it may be truly said that, had a far different tone pervaded the observations of the dethroned monarch, the moment and the occasion might well have been pleaded in excuse. During this most interesting interview, there were no other persons present save General Rumigny. It was an interview not easily to be forgotten."

During the afternoon, several gentlemen had the honor of an interview; among others, G. Molineux, Esq., and the Rev. Dr. Cary, of Lewes. On learning the name of the former, the ex-king, after replying to that gentleman's congratulations on his safe arrival, observed that "he well remembered that name of Mr. Molineux, when at Lewes many years ago."

Soon after this, a special train arrived at Newhaven, conveying the Hon. Captain Hotham (one of the directors), who immediately had an interview with Louis Philippe, and despatched for town a letter Queen Amelia had written to Queen Victoria. The royal party then resolved not to quit Newhaven until next day.

Toward eight o'clock, General Dumas arrived at the inn from the town, accompanied by Count de Jarnac, of the French embassy, who had an interview with the king. At a later hour, Mr. Irons returned from London, having delivered his despatch to Prince Albert, and being charged with a private message from her majesty, through Prince Albert, for the exiled monarch.

On Saturday morning, before eight o'clock, several ladies and gentleman had arrived, anxious to pay their respects to the royal party. Among these were Mr. Lawrence and Lady Jane Peel, and the Rev. T. Cooke, with Miss Augusta Otway, who came from Brighton; and the Rev. Mr. Brookman and his lady, of Rottingdean. Count Duchâtel, minister of the interior, who also arrived from the Bedford hotel, Brighton, had an audience of his royal master. Large parties likewise arrived from Brighton and Lewes; and an address from the latter place was presented by a deputation, headed by Edward Blaker, Esq. Toward ten o'clock, a number of ladies had assembled in the large room of the inn, whither the king proceeded to pay his respects. The royal party then prepared to take their departure, but their progress down stairs was intercepted at every step by fresh comers. In the passage were stationed the scholars of the Lewes free grammar-school, on whose behalf the Rev. Dr. Cary (principal) presented two addresses, one in Latin and the other in French, bearing the signatures of the pupils. His majesty received these marks of youthful attachment and sympathy most graciously, and having placed himself in front of his young auditors, addressed a few sentences to them expressive of his appreciation of the feeling which had prompted them to approach him, and assuring them he would read and retain the addresses they had presented to him in his misfortunes. This concluded, the signal for departure was given, and the king, assisted by the Count de Jarnac, and her majesty, conducted by the honorable Captain Hotham, and followed by Generals Dumas, and Rumigny, M. Pauline, M. Thuret, and Mlle. Muser, descended the stairs as quickly as the crowd permitted. Just before leaving, the king emphatically conveyed his thanks to Mrs. Smith, the landlady; and the queen, who had been attended by Miss Skinner and Miss F. Stone, of Newhaven, embraced them, thanking them for their attention; the king shaking hands with them, and adding his earnest thanks.

The royal party then proceeded to the railway station, and at eleven the train took its departure. At quarter past twelve the train reached the Croydon station, where they were joined by the duke and duchess of Nemours, and thence the royal party proceeded by carriage to Claremont, where they at present remain.

The town of Newhaven lies on the Sussex coast, seven miles south from Lewes, four miles west of Seaford, and nine east from Brighton. It has a good tidal harbor (the Ouse), capable of great improvement, having considerable natural advantages, and situate midway between Portsmouth and Dover.

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Louis Philippe and Party at Breakfast at the Bridge Inn, Newhaven.



LECTURES ON ASTRONOMY.—No. 5.

BY PROFESSOR O. M. MITCHELL.

If it were possible for me to transport you to the distance of ninety millions of miles in a direction passing through the sun's annual track, and could there locate you, your sight would in a short time be greeted with a most wonderful and sublime exhibition. You would see approaching you a magnificent world, rapidly whirling upon its own axis. Around this vast central orb you would find a number of beautiful rings of light: these, too, would be seen to be whirling around with surprising velocity. On the outside of this again you would mark, as the object approached nearer and nearer, no less than seven subordinate worlds sweeping around the great central orb and with it rolling through space. This is the planet Saturn with its rings and moons; and it is to this object I propose, primarily, to call your attention. It is the most distant of all the old planets known to the ancients, its period is the longest, and its movement the slowest and most majestic. Up to the time of the discovery of the telescope, the wonderful characteristics which mark this object were unknown, but when Galileo directed his space-annihilating tube to its investigation he announced to the world that he found Saturn to be triple—that there were what he conceived to be two globes attached to the main body, one on the right and the other on the left. But these were only the projections of those mighty rings standing oblique to the line of vision, and seen imperfectly through his glass which magnified but twenty or thirty times. They appeared to him to be projections or globes attached to opposite sides of the main body of the planet. As the telescope was improved, these projections had their true character revealed, and it was seen that a flat annulus, or ring, passed entirely around the globe of the planet and was separated by a certain amount of distance. As the power of the telescope was increased, and more minute investigations were made, it was found that the broad ring was divided into two rings; and in modern times, within the last few years, by the aid of the mighty telescopes now engaged in astronomical investigations, it has been ascertained that the outer of these rings is again divided, and there are no less than three which encircle the planet. The satellites were not discovered till long after the time of Galileo. In the year 1655, we learn, one of them was seen; and shortly after four more were announced. Then Sir William Herschel, with his forty-foot reflector, detects the two minute bodies that seem to cling closely to the edge of the ring and are scarcely ever

visible in consequence of the intense light thrown out by the planet. Here, then, we have three rings and seven satellites, or moons, which belong to this most wonderful sphere: and remember that all these are sweeping with the planet through space, and as it wheels its circle about the sun, they move regularly with it, obedient entirely to its control. But what are these mighty rings? The exterior diameter of the outer one is no less than 177,800 miles, their breadth, measured entirely across both rings, is 30,000 miles, and their thickness is one hundred miles. How strangely are they constituted! how wonderfully are they poised in space! We can understand the original movement of all the planets with the exception of Saturn; we can form some idea how *our* earth, which we know to be globular, might have been projected by the hand of Omnipotence, and caused to revolve in its orbit about the sun; but how was it that these stupendous rings were hurled in such a manner as to acquire that stability of movement which holds them steady to the action of the central planet, and at the same time rolls them onward through space with the immense velocity with which they move? This portion of our system baffles all conjecture: it rises entirely above the comprehension of the human mind. While we make some rough approximation to the notion as to how the other planets might have been launched in space, we can form no conception of the manner in which this one was started in its career.

But what are these mighty rings? Are they merely a mass of light? Are they projections of the atmosphere belonging to the planet? Are they portions flung out by the centrifugal force, and thus in some sense held steady in their position?—Are they solid bodies? I answer; they *are* solid bodies, and of the same material that composes the body of the planet.

But how do we know this? In the first place, we know them to be solid because, as the planet with its rings passes between us and distant groups of stars, such stars are first occulted by these rings. In the next place, they are not transparent in any degree, because of the fact that at the distance of nine hundred millions of miles we are able to mark the space of the shadows cast by these rings on the body of the planet. Night after night, month after month, and now almost year after year, have I watched with my own eyes the phases of these wonderful shadows. They are deep and dark, much blacker than any shadow you find cast upon the surface of the earth.

But again, they are able to exhibit the same characteristics themselves, and in certain positions we find the light of the sun falling upon

the body of the planet, which casts a shadow upon the broad surface of these rings; and though we have the same blackness as before, here is the distinct shadow cast by the planet upon the ring. Now, as we watch them attentively, we find invariably that these shadows depend upon the position of the sun and certain positions of the planet and rings. Just as the shadows which are cast upon the surface of the earth depend upon the position of the source of light, so do these; and they follow with the same precision and accuracy the movement of the source of light that shadows do upon the earth, and hence we can not be deceived.

The space by which the interior ring is separated from the body of the planet is no less than twenty thousand miles, and the breadth of the ring is about ten thousand miles before we reach that space which separates it from the next ring, and so onward till we pass the outer one, of which I have just spoken.

Now how is it that these rings are held stable? How is it that they, detached from the body of the planet, are carried with that planet through space? The stability of the rings of Saturn is perhaps one of the most difficult and perplexing problems for the astronomer, and I would do injustice to the subject were I to pass over it without attempting to give some notion of this singular problem. And before I begin, permit me to explain the fact that there are three different kinds of equilibrium—for our understanding of this will be involved in our understanding of the explanation which I am about to make. I will attempt to exhibit these three different kinds of equilibrium by the simplest possible explanation. If I were to suspend a rod from the top, and cause it to vibrate as a pendulum, it would finally stop of itself. Here is an equilibrium of stability. Why? Because if I move it ever so little to the right or left it will come back to its original position. Now if I take the same rod and balance it horizontally across my finger, it being equal in magnitude and density throughout, I have an equilibrium of inertia, because if I move it slightly it will not return, but remain wherever I place it. Now there is a third kind, exemplified by taking the same rod and poising it upon my finger: so long as I can hold the centre of gravity above the point of support, I hold it steady; but the slightest inclination to either side destroys the stability. This is an equilibrium of instability, in consequence of the fact that every deviation tends to increase itself, and therefore destroy the equilibrium entirely.

Having explained the three kinds of equilibrium, let us now, if you please, pass to the

examination of the system of rings of Saturn. It is found by close investigation that in case these rings are precisely circular, in case they are equal in density throughout, in case their centre of gravity is their centre of figure, and in case we add to this the fact that this centre shall coincide with the centre of the planet, about which they are placed, then the equilibrium is one of instability, and with the slightest cause that comes in to derange the system such derangement will go on increasing itself, and the centre of gravity of the ring will commence moving in a spiral line about the central planet, the ring approaching closer and closer to that body till finally it is precipitated upon the planet and the whole structure is destroyed. On our examination of the ring we find it to be circular, and in the early examination it was believed that the centre of gravity was coincident with the centre of the figure of the ring, and moreover, that the centre of gravity of the figure coincided with the centre of the planet. This being supposed to be the fact, it seemed impossible that this system should be perpetual, in case there was found in the satellites which revolve upon the exterior a disturbing influence sufficient to draw this centre slightly away, and thus begin that very kind of motion which must end in final destruction. It was not till after Laplace gave his mighty intellect to the solution of this problem that the truth was discovered. He found that the stability could not be guaranteed in any other way than by making the ring unequally thick in different parts, or at least of a different specific gravity. This was not all: it was necessary to move the centre of gravity from the centre of gravity of the planet, and cause it to revolve about that centre in a minute orbit. Yet, however strange this might appear, it seemed as if Saturn was too remote for the telescope ever to verify the principle of this extraordinary statement. But it happens, fortunately for us, that in the position which we occupy in the system, these rings which are so very thin, are occupying a position such that the eye is situated in the plane of the ring and we see them edgewise; and when we view them in the first place they exhibit the appearance of a line of light drawn across the diameter of the plane passing through this centre. Now in the disappearance of the ring by its taking up this position, we are enabled to examine with the utmost possible accuracy, and it has been found that the two extremities do not disappear at the same time, and that there are inequalities upon their surface which are well marked and defined—the very thing precisely that Laplace predicted would be the case, provided an instrument should be found of sufficient power to discover them to the eye.

But this was not all: the most delicate micrometrical apparatuses were constructed, and with these—which were capable of measuring the most minute distances—the spaces between the planet and the ring, upon the right and left, were determined; and it was discovered that these spaces were unequal, not only unequal but variable, and not only variable but changing according to a certain law. Thus it was shown conclusively and absolutely that the centre of the planet did not occupy the centre of the ring, thus bringing in the other condition requisite for stability, and fastening the whole system permanently in space.

Now how could these rings have been formed? Is it possible that they were attached to the planet after it commenced its journey in space? It seems impossible for us to conceive how this might be accomplished; hence some philosophers have adopted the idea that they were formed at the same time with the planet, and by the action of the same law; and in all probability the celebrated nebular theory of the formation of the universe derived more support from the exhibition of Saturn's system, than from all other causes combined. It was supposed that in the beginning of all things, the matter which now forms the sun and planets and satellites, was diffused throughout all space, or if not throughout all space at least to a vast distance from the place which the sun now occupies; and that this incoherent matter was divided and its particles held asunder by the repulsive power belonging to it. Laplace conceives that in process of time—under the action of gravity—the mass of particles commence a movement toward a centre, and in coming from positions diametrically opposite they pass each other, and thus a rotation is commenced about an axis. When millions of years shall have rolled away, and when this mighty sea of crude matter shall have been slowly impregnated with gravity and consequently with motion, it will contract, and as it contracts its velocity of rotation must increase, till finally the centrifugal force generated at the equator of the revolving mass overcomes the force of gravity, and a flat portion is detached from it in the form of a ring. When this has been once loosened and detached, after millions of years shall have rolled round, we find the central mass contracting and leaving this ring in space; revolving with the velocity due to the revolving mass at the time it was detached. Now then, in the process of the formation of the planet, this ring may by possibility break up and coalesce into one mass. The same cause which operated in the outset to detach the ring from the mass, will in the second instance detach from its equator other masses which may form satellites; or these by possibility may even remain

and become solid in the form in which they were first thrown off. If we admit this wonderful and strange theory we can understand how it was that the mysterious system of Saturn existed, and how the conditions of stability were such as they now are, and how it is that this body moves on, century after century, without any change—with the stability which fastens every part of it for ever permanent.

I do not pretend that this is the manner in which this system was formed; I do not know—I can not fathom—any such mysterious problem; but one thing, however, I do know, and that is this: that if by the application of the higher powers of analysis this most extraordinary theory is demonstrated to be true, it carries the mind higher and nearer to the great source of all things than any other which the human intellect has ever devised. It gives a more comprehensive idea of the omniscience and omnipotence of God than any other theory of which I have any conception: for here, with matter in a chaotic form and scattered throughout all space, having been brought into existence by the fiat of his will, by the action of one solitary law the universe—as boundless as himself—is upheld and sustained forever!

We pass on from the examination of this subject to another. If in the planet Saturn it seems as if the analogy by which the system is governed has been broken, we shall find in the next planet which revolves upon the exterior of this, a still more strange anomaly. For a long time there were certain difficulties with regard to the movements of Saturn, which seemed to perplex philosophers: it was getting out of its computed place, and the most extraordinary difference was seen in the movements of Jupiter when compared with those of Saturn. It was found that during the whole of the seventeenth century one of these planets was perpetually getting behind its computed place, while the other was getting in advance. It seemed that the two were moving in some way in which one was dependent upon the other, and it was next to impossible to discover how it was to be made out. Finally the problem was taken up by Laplace, and solved; and the explanation is perhaps as curious as any which has ever been presented for the examination of the human mind. Who would suppose that the stability of our system depends in any degree upon the relation existing between the periodic time of the planets? Yet this is the fact.

We find that in case the periodic times of any two planets should happen to be in such a relation to each other, that one of them taken a certain number of times should be equal to the other taken a certain number of times different from the first, then irregularities

would be introduced in the system, which would go on always increasing in the same direction and the equilibrium would be that of instability. Now it happens in the periodic times of Jupiter and Saturn there is a close proximity to such a relation—five periods of Jupiter being about sixty years, and two periods of Saturn about the same time. Now suppose to-night Jupiter and Saturn occupy a given position with reference to the sun, and they start out on their career: at the end of sixty years they will come round again to occupy almost exactly the same relative position; and whatever effect Jupiter may have had to hasten the movement of Saturn, or Saturn to retard that of Jupiter, will again be repeated in the same way and in the same position, without the possibility of restoration, except with a difference of configuration on the opposite side. Strange as it may appear, this particular case comes very nearly, though not quite exactly, to that of these planets: they do not reach the same position by an amount equal to something like six or seven out of the 360 degrees: here they are a little behind at the succeeding year—at the next still further—at the next they have changed yet again, till now after about 2,500 years they come to occupy the first position in all the successive rounds of their orbits; and not till they have gone entirely around will the compensation be effected and the system be restored to its original condition. Such is what is called the long equation of Jupiter and Saturn.

I do not mean to say the period is 2,500 years; because in consequence of the fact that they come to resume the same relative places in different parts of their orbits the same will be effected in a shorter time: and indeed in consequence of this difference of configuration in different parts of their orbits it is accomplished in nine hundred years.

It appears then, that this particular case which seemed to set the law of gravitation at defiance, is reduced absolutely within the control of the law, and a most beautiful explanation of the phenomena is presented.

When these difficulties had been removed, a more rigid scrutiny seemed to reveal others in Saturn, till finally, after having exhausted all the means within the limits of the solar system to account for them, some mind ventured to pass the limits that had hitherto circumscribed it, and say, "There must be a planet upon the outside." But no one dared at that time to undertake the resolution of the vast problem, by whose solution the position of the unknown body could be determined. Fortunately for the world, in 1781 Sir William Herschel in one of his telescopic explorations found an object which attracted his attention: in short, he saw in it something which resem-

bled a planetary disk. On the following night the examination showed that body to have changed its place; yet so little did he expect to find another planet, that he announced he had found a comet and commenced to compute its orbit; but found no elongated orbit would suit the place which had been given to it and that nothing but the circular, or nearly so, would fulfil its conditions. It was found to be a planet revolving outside of Saturn, at a distance of eighteen hundred millions of miles from the sun. This (first called *Georgium Sidus* in honor of King George III.) is known by the name of *Herschel*—more generally called *Uranus*.

In the course of five or six years, *Herschel* announced he had found six satellites revolving about the body; but what astonishment every one, was the announcement that these satellites, instead of following the analogy of the other known planets by revolving in the same direction in which the planets moved, were actually moving backward in their orbits, and nearly perpendicular to the plane of the ecliptic. Here was a difficulty in the great system of the universe called "*Laplace's theory*," which I have already announced. If this system was formed as he supposed, how is it possible to account for the retrograde motion of these satellites, and for the fact that their planes are nearly perpendicular to the plane of the ecliptic? Perhaps it is impossible to account for it; but if we will admit that such a thing may occur as the impinging of a comet upon any body in our system, it would not be impossible to account for those retrograde movements, nor for this great inclination, by supposing at the time this was a fluid mass, the movement may have changed its rotation upon its axis, and have caused the satellites to take the position they now occupy. I do not present this for any one to receive as a true hypothesis; it only shows that those who adhere to a particular theory will find ways and means of explaining difficulties which others never would think of. Neither do I wish to be understood as having adopted *Laplace's theory*; very far from it. It remains to be demonstrated yet, and it is possible the means may yet be attained whereby, by the power of analysis, we may bring out the truth or falsehood of this most stupendous theory. We are obliged, therefore, to accept the statement of *Herschel* for the present, although, so far as I know, up to the present time no eye has ever seen more than three out of the six satellites which he tells us revolve about this planet.

When this planet had been watched a sufficient number of years, and the observations had been made by means of which its orbit could be computed with accuracy, and the

place which it had occupied years and years before its discovery, on running back through the catalogues of stars which had been formed by preceding astronomers, it was found that this body had been seen a number of times and had had its place fixed in the heavens, being regarded as a fixed star. These early observations were of infinite value in determining a more accurate orbit of this planet, so that long before the elements of this orbit were known it was possible to predict its position in all coming time. But when these predictions were made, and when observation and theory were compared, it was found that the planet was deviating from its computed place—it was found that no analysis could confine it: it has broken away from its computed orbit, and at the distance of eighteen hundred millions of miles from the centre this body seemed to be moving lawlessly through the heavens.

In order to resolve this great problem, it would be necessary to go into a minute investigation of all the observations that had been made; to go back from the planet through the whole solar system to the sun itself, and to ascertain with the most perfect precision what influence was exerted by all the known bodies upon this one. If, after every possible influence had been admitted, accounted for and applied, there were yet outstanding inequalities remaining unaccounted for, it certainly became necessary to look for their cause beyond the limits of the known solar system. This was the problem taken up by Leverrier, and to which I will now call your attention.

Perhaps there is no person living in the world who occupies so unfortunate a position as the individual just named. This may sound strangely in your ears. The difficulty is this: that he has accomplished the resolution of one of the most sublime problems ever attacked by the human mind—literally and truly accomplished it—and yet that problem turns out not to be the problem of nature, or one that God had given to be resolved! I know how difficult a task it will be to explain this, and it is this particular difficulty which constitutes the truth of what I have stated, that his position is one least to be envied; for he probably never will receive the credit due to him, in consequence of the fact that the planet so recently found is not the planet of his analysis.

But now for the examination of this matter. Leverrier is a comparatively young man, and had shown the power of his genius by a rigid examination of the conditions involved in the movements of the planet Mercury. He had taken up the old tables which seemed to govern the movements of this planet, and had corrected them from beginning to end. It

was believed that the knowledge which we already had of the movements of this body was sufficiently correct for all practical purposes. The transit of that planet across the sun, which occurred not long since, gave the opportunity of testing the accuracy of his own investigations, in the most perfect manner; and when the results came in from every quarter of the world, and were concentrated at Paris, and presented for examination, it was found that he had predicted the instant at which the planet should touch the disk of the sun more accurately than any other person who had attempted it; and indeed he only failed by the amount of sixteen seconds of time.

His great success in this particular induced his friend Arago to request him to attempt the resolution of the problem of the perturbations of Uranus. He commences, not to skim superficially over the surface—taking for granted what had already been done—but goes back to the first observation recorded, and traces each and every one down the stream of time, sifting out everything which belongs to each one of them. Not satisfied with this, he commences a review of all the planets that can operate upon its motion, makes a new theory for Saturn, and for Jupiter, takes into consideration even the change of position occasioned by the action of Jupiter upon Saturn itself, and the minute subsequent changes in the action of Saturn upon the planet nine hundred millions of miles distant from it. All these things are gone through, and with the hand of a master he holds the problem steadily before his gaze, and seizes every point with perfect certainty. At length he has accounted for the perturbation due to the action of any known body in the solar system, and there is a certain amount yet outstanding. And now the grand object is to pass upon the true elements and see whether it be possible so to locate a planet in space that it may account for this outstanding perturbation, and whether by giving to it this position it be possible to find it. How did he attempt this? To most persons it would seem utterly beyond the grasp of the human intellect. But let us consider.

In the first place: Bode's law of distances told him about where it would be located in space. As Saturn was about twice as far from the sun as Jupiter, and Uranus twice as far as Saturn, he had a right to conclude that possibly the unknown body would be located at twice the distance from the sun of Uranus, or three thousand six hundred millions of miles. Having obtained the distance, Kepler's law gave him the periodic time, and the velocity became proximately known. But now the great point was to get one particular position, and if that could be obtained he could follow its progress and tell where it would be at the

the knowledge which we have of the movements of this body was for all practical purposes. The planet across the sun, long since, gave the opportunity of accuracy of his own in the most perfect manner; and in from every quarter were concentrated at Paris, examination, it was found at the instant at which the disk of the sun more than any other person who had attempted he only failed by the seconds of time.

in this particular induced request him to attempt the problem of the perturbations commences, not to skim surface—taking for granted been done—but goes back to the beginning, and traces down the stream of time, from which belongs to each person satisfied with this, he commences all the planets that can be detected, makes a new theory of Jupiter, takes into consideration of position occasioned by the action of Saturn itself, and subsequent changes in the action of the planet nine hundred years distant from it. All these things, rough, and with the hands of the problem steadily becoming length he has accounted for due to the action of any other solar system, and there is yet outstanding. And now to pass upon the true element whether it be possible so to space that it may account for the perturbation, and whether position it be possible to attempt this? To most men utterly beyond the grasp of the intellect. But let us consider.

Bode's law of distances where it would be located in space was about twice as far from the sun as Jupiter, and Uranus twice as far from the sun as Jupiter, and a right to conclude that the unknown body would be located between the sun of Uranus, at a distance of hundreds of millions of miles. The distance, Kepler's law of the elliptic time, and the velocity of the planet were known. But now the question of one particular position, whether it could be obtained he could follow where it would be at the

end of any given time. To accomplish this he commenced an examination of the derangement in the planet Uranus. He found that in certain parts of its orbit it is going further and further away from the sun. Its radius, or direct line to the sun was elongating. This he thought was no doubt occasioned by the action of a planet. Let us locate the two planets in imagination. Suppose they are on the same side of the sun. Then the space by which they are separated is but eighteen hundred millions of miles. But if their position is on opposite sides of the sun, the distance is increased by the whole diameter of the orbit of Uranus, or thirty-six hundred millions of miles. Then there will be a vast difference between the power exerted in one position from that in the other. Now if he could only find a point in which Uranus is drawn furthest from the sun—if it commences to sweep out, and having passed a certain point begins to gradually draw in, from the point where it was most drawn out, then in the prolongation of a line from the sun, passing that perihelion point must the unknown body be found. All he had to do was to find where Uranus was drawn furthest from the sun, and looking out in that direction he locates the body that draws it out. Having, therefore, found one position, and the time when Uranus occupied that position, from its known periodic time, he traces up its movement and says at such a day it will occupy such a point in the heavens. He reaches the conclusion of his investigation and presents the results to the institute at Paris; they are thrown before the scientific world; they are received with incredulity and doubt by the best living astronomers; the problem seems to have been too mighty—too intricate for any mind. But Leverrier desires them to point their telescopes to the position in which he says the unknown body exists: his request is granted, and lo! to the amazement of the whole world, there is a planet exactly in the place pointed out.

There was the triumph complete; and if any had before doubted those doubts were now removed, and the whole world rang with the praises of the great astronomer, Leverrier.

And now, as if to make everything doubly sure, it is found that a young man of England had been engaged in investigating the same problem, had reached the same results, and seven months before Leverrier had published his, he had presented them to the astronomer royal of his own kingdom and the professors of his own university. They, not daring to take the responsibility of uttering them before the world, failed to do it; but so soon as Leverrier's computations were known, so soon as the planet was found, then it became certain that he had been investigating precisely

the same problem and reached the same identical results—each confirming the other, and the two combined convinced the world that they had reached the true results.

Now do you think it possible that this is all false? Having carried you to this point, am I obliged to tell you that these computations had nothing whatever to do with finding of that planet? Yet I am absolutely obliged to do it, for it is true. How then shall I show you and convince you, that in announcing this truth I do not pluck a solitary laurel from the brow of this great man. No, not one! There they are, green as in the moment of their winning, and there they must remain for ever.

As soon as it was known that the planet was discovered, telescopes were directed from every part of the world to its scrutiny. Its movements were followed with the most intense anxiety for the purpose of ascertaining how nearly the *real* coincided with the *computed* elements. Adams led the way, as he had before done in the computation of the elements derived from theory, and when he reached to the knowledge of the actual distance of the discovered planet, he was the first who found and announced that hitherto the discrepancy between the distance now absolutely known, and the first computation of the distance, amounted to about three times the distance of the earth from the sun. He had found by computation before the discovery that at the time of the discovery it ought to be thirty-three times the distance of the earth from the sun, whereas it was but thirty times. This did not appear to be a very great discrepancy, yet it was more than was anticipated; for had it been an error of three times the distance of the earth on the opposite side, there would have been more reason in it, because it would have coincided more nearly with the distance revealed by the law of Bode. It seemed, in consequence of the fact that it had fallen on the inside, in some sense to have violated this law.

But again: more time rolls on, and better observations are obtained. Finally, there seemed to be no data to commence a computation of the orbit, that should reveal what the phases of the planet were in years past and gone, as well as what they will be when hundreds of years shall have rolled round. One of our own countrymen engaged in this investigation with ardor, zeal, and success. Walker, of the United States coast survey, obtained an orbit, and thought he could trace the motion of the planet backward for a hundred years. In tracing it backward he hoped to find in the catalogue of the fixed stars some one that might have been observed which should prove to be the planet, and thus give us the advantage of a long series of observa-

tions extending over many years. The later catalogues were examined: he went back fifty years, till finally he took up the catalogue of Le Lande, made in Paris. He found the stars recorded by him, computed the reach through which he knew the planet to have followed at that date, till he discovered that on the 10th of May, 1795, Le Lande had observed a star which then occupied a place where he computed the new planet should have followed at that date. But how could he verify his prediction that this was the place, and Le Lande had seen the planet at that very date? He turns his telescope to the region in the heavens which Le Lande's star had filled, and if it were a fixed star it would be found there, but if it should turn out to be a planet, then would that spot be blank. The telescope was directed and lo! the spot was a blank. Thus it was believed that this was the place of the planet; but when this place was taken into account, and when this observation was combined with later ones, behold! the orbit determined for this new body, and the periodic time, fell entirely beyond the limits of Leverrier's and Adams's computations, who had announced that it could not be a period shorter than 210 years nor longer than 268 years. Here was a great discrepancy, so that it was impossible that this could be the planet of their theory, in case these observations could be sustained. And now it was that every eye was at once directed to the catalogue of Le Lande, to see what his observations were, and distinguish as to what observations were marked doubtful. There were discovered two little dots placed opposite this observation, and referring to his preface, it was found that observations marked with dots were not to be relied upon. Those who longed to find the grand theory which had been built by Leverrier to be true, hoped in this mark to find that which would save the system. So soon as a knowledge of this fact came to the institute at Paris, they appointed an astronomer to review all the old manuscripts of Le Lande. It is found that on the night of the 16th of May, 1795, he made this observation and marked it doubtful. On the same identical piece of paper is discovered an observation made on the 8th of May, on a star, which he believes to have been incorrectly made; this he rejects and takes up what he thinks to be the same star, observes it on the 10th, prints that observation, rejects the other and marks the printed one doubtful. Now what a singular state of affairs is here? But the moment the orbit of the planet is computed, that star of the 8th, is found to be in the place of our planet; and so instead of having one we have two observations, and the distance between the two stars of the 8th and

10th is the same the planet ought to have travelled, upon the hypothesis we have already given.

Now there seems to be no doubt left in regard to that fact that Adams and Leverrier stand before the world in a different position from what they had previously occupied; but there is something yet left to be ascertained. There is a planet found in a most wonderful manner, occupying almost precisely the position their planet did occupy. Is it the planet that accounts for the perturbations of Uranus, or is it not? This is the next question for examination. In order to ascertain that fact, it became necessary to know the mass of this new planet. In the onset it seemed hopeless to look for an answer to this question for a long period of years. But the scrutinizing gaze now directed to the heavens does not permit the most minute point to escape. At length it is announced that from the distance of three thousand millions of miles, the light of a little satellite is flung back all the way to the earth, and that little satellite, by its periodic time around its planet, reveals to us how much matter belongs to this most distant orb. Now, although at present I do not know precisely the amount ascertained, for we have only approximated to it, yet the knowledge we have obtained tells us most certainly and absolutely that no mass can be assigned consistent with the periodic time of this satellite, which will account for the perturbation of Uranus; hence the conclusion is forced upon us that this is not the planet of theory, but we have got to look further before we can settle the question as to what produces all the perturbations belonging to this interior planet.

Now can I reconcile my statement or not? Have Leverrier and Adams failed in the problem they undertook to investigate? Have the facts I have brought out lowered them in your estimation? I hope not; for I can truly feel for these great men. They had resolved the problem they undertook; they had done it correctly; and in this they displayed the most extraordinary genius that ever has been exhibited by any human mind; but alas! for their fame, the problem they solved was *not* the problem of nature. God has permitted us to see that, and if I were permitted to interpret anything I would almost say, here is a special Providence to reward the lofty and powerful efforts of mankind. Such was the structure of the system that it was impossible to attain to a knowledge of it without the solution of this problem, and such was the grandeur of the problem solved, that it deserved as its reward a world, and a world was given.

I know you can comprehend this if I bring you back a little, and refer to what I told you the other night with reference to the asteroids,

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which sweep around between Mars and Jupiter. Suppose, before these were discovered, some daring genius had undertaken to resolve the mysteries in which the movements of Mars were involved and should have reached the conclusion, that they were produced by the action of a certain planet located between Jupiter and Mars, at a certain distance, and revolving in a certain period of time. Now here is a problem presented for solution, and worked out with consummate skill; but when the facts come to be known this problem does not exist in nature; for there are no less than eight planets revolving in these limits, and combined they produce the same effect that would have been produced by the constructive planet. This is precisely the case in point, and this is the reason why it was impossible for Adams or Leverrier to give the elements of the orbit of the planet now found; for I have no doubt this is only one of more bodies which exist in the same region.

Whether we shall ever attain to a knowledge of them, or be permitted to feast our eyes on them, it is impossible to know; but, a year ago, in the discussion of this subject, when I did not doubt that this was the planet, I ventured to say that, in case it should be found hereafter that the orbit of this planet was not very eccentric—carrying it off to a much greater distance than it now is, and thus accounting for the fact that its distance is less than that assigned by the law of Bode—that it was one of a group, how extended it is impossible to say.

I know the difficulties which I have had to encounter. I have tried to impress your minds with one great truth. I do not know how successful I have been; but I can not close without repeating once again: although this new planet is not the planet of Leverrier and Adams's theory, yet it does not in the smallest degree detract from the just fame which is due to them for the resolution of this mighty problem.

GUTTA-PERCHA.

ALTHOUGH the trees yielding gutta-percha abound in the indigenous forests of Australia, it is scarcely five years since it was discovered by Europeans. The first notice taken of it appears to have been by Dr. William Montgomerie, in a letter to the Bengal Medical Board, in the beginning of 1843, wherein he commends the substance as likely to prove useful for some surgical purposes, and supposes it to belong to the fig tribe. In April, 1843, the substance was brought to Europe, by Dr.

d'Almeida, who presented it to the Royal Society of Arts, London; but it did not at first attract much attention.

The gutta-percha tree, or gutta-ruba, as it ought more properly to be called—the percha producing a spurious article—belongs to the natural family *sapotea*, but differs so much from all described genera, that the naturalists of Australia are inclined to rank it as a new genus. The tree is of large size, from sixty to seventy feet in height, and from two to three feet in diameter.

The mode in which the natives obtain the gutta is by cutting down the trees of full growth, and wringing the bark at distances of about twelve to eighteen inches apart, and placing a cocoa-nut shell, spathe of a palm, or such like receptacle, under the fallen trunk to receive the milky sap that immediately exudes upon every fresh incision. This sap is collected in bamboos, taken to their houses, and boiled, in order to drive off the watery particles, and inspissate it to the consistence it finally assumes. Although the process of boiling appears necessary where the gutta is collected in large quantities, if a tree be freshly wounded, a small quantity allowed to ooze out, and it be collected and moulded in the hand, it will consolidate perfectly in a few minutes, and have all the appearance of the prepared article. When it is quite pure, the color is of a grayish white; but, as brought to the market of Australia, it is more ordinarily found of a reddish hue, arising from chips of bark that fall into the sap in the act of making the incisions, and which yield their color to it. Besides these accidental chips, there is a great deal of intentional adulteration by sawdust and other materials. Some specimens that have been obtained were found to possess very little short of one fourth of impurities; and even the purest specimens yield, on being cleansed, one ounce of impurities per pound. Fortunately, it is difficult neither to detect nor to clear the gutta of foreign matter; it being only necessary to boil it in water until well softened, roll out the substance into thin sheets, and pick out all impurities; which is easily done, as the gutta does not adhere to anything; and all foreign matter is merely entangled in its fibres, not incorporated in its substance.

Mr. Oxley has calculated that the quantity exported from Singapore to Great Britain and the continent, from the first of January, 1845, to the present date, amounts to about 7,000 piculs; and that to obtain this quantity nearly 70,000 trees have been sacrificed.

When fresh and pure, the gutta is of a greasy feel, with a peculiarly leathery smell. It is not affected by boiling alcohol, but dissolves readily in boiling spirits of turpentine; also in naphtha and coal tar. A good cement

for gluing bottles and other purposes, is formed by boiling together equal parts of gutta, coal tar, and resin. When required for use, it can always be made plastic by putting the pot containing it over the fire for a few minutes. The gutta itself is very inflammable—a strip cut off takes light and burns with a bright flame, emitting sparks, and dropping a black residuum in the manner of sealing-wax; which, in its combustion, is very much resembles.

But the great peculiarity of this substance, and that which makes it so eminently useful for many purposes, is the effect of boiling-water upon it. When immersed for a few minutes in water above 150 degrees of Fahrenheit, it becomes soft and plastic, so as to be capable of being moulded to any required shape or form, which it retains upon cooling. If a strip of it be cut off and plunged into boiling water, it contracts in size, in both length and breadth. This is a very anomalous and remarkable phenomenon, apparently opposed to all the laws of heat. It is this plasticity, when plunged into boiling water, that has allowed of its being applied to so many useful purposes, and which first induced some Malays to fabricate it into whips, which were taken into some of the towns in Australia, and led to its further notice. The natives soon extended their manufactures to buckets, basins, and jugs, shoes, traces, vessels for cooling wine, and several other domestic purposes. The number of patents lately taken out for the manufacture of the article in this country, proves how much attention and interest have been attached to it, and how extensively useful it is likely to become.

SAINT THOMAS, WEST INDIES.

ST. THOMAS is one of the three Danish Virgin Islands, and is about twelve miles long from east to west, with an average width of two miles and a half, which gives a surface of about thirty square miles. It is very uneven, but the height of its mountains has not been ascertained: the most elevated are west of the harbor of St. Thomas. Most of the white inhabitants are of Dutch origin, and Dutch is the common language. The plantations have yielded in one year 20,000 cwt. of sugar, 54,000 gallons of rum, 18,000 gallons of molasses, and some cotton. But as large tracts are unfit for the production of colonial articles, maize, ground provisions, and fruits, are cultivated to a considerable extent.

The town of St. Thomas is built on the north shore of a fine bay, which is about three

miles long, and two wide, and has good anchorage for 200 vessels. It derives its importance from being a free port, open to all nations, and, consequently, a great entrepôt for articles of plantation consumption, such as timber, corn, and flour, which are shipped to it in large quantities from the United States. The town is built on three conical hills, of nearly equal elevation, on which stand some well-constructed fortresses, commanding the harbor and shipping. The houses are built of stone or brick, and are tiled in the Dutch manner. The population is stated to exceed three thousand individuals, of whom four hundred are whites. The Virgin Islands, generally, are subject to earthquakes, but the shocks are slight, and are not attended with such dreadful consequences as in the Antilles, which are further to the southeast.

COTTON-BLEACHING.

COTTON, flax, wool, and silk, have all, in their natural states, a certain shade of color. These tints remain with them more or less during the processes of weaving; so that if it be desired to produce them in a perfectly white form, it is necessary to subject them to some bleaching process. Bleaching, it must be borne in mind, is not imparting a color to cloth, but removing all color from it.

The Egyptians and other ancient nations appear to have known certain modes of bleaching linen cloth; but their processes, as well as those of later ages, are not well known to us. Until about a century ago, bleaching was hardly known in England, in either theory or practice. The brown linens made in Great Britain were sent to Holland to be bleached. This process consumed a long period, namely, from March to October of each year. The principal Dutch bleaching-grounds were in the neighborhood of Haarlem; and the great success of their bleaching was ascribed to the superior efficacy of the water, which was filtered sea-water. The process consisted in steeping the linen for about a week in a potash ley poured over it boiling hot. The cloth was then taken out of the ley, washed, and put into wooden vessels containing butter-milk, in which it lay under pressure for five or six days; after this it was spread upon the grass, and kept wet for several months, exposed to the sunshine of summer.

In 1749, an Irishman introduced a somewhat similar mode of bleaching into England, and after many difficulties, succeeded in effecting it tolerably well, but with lamentable slowness. From this time, a succession of im-

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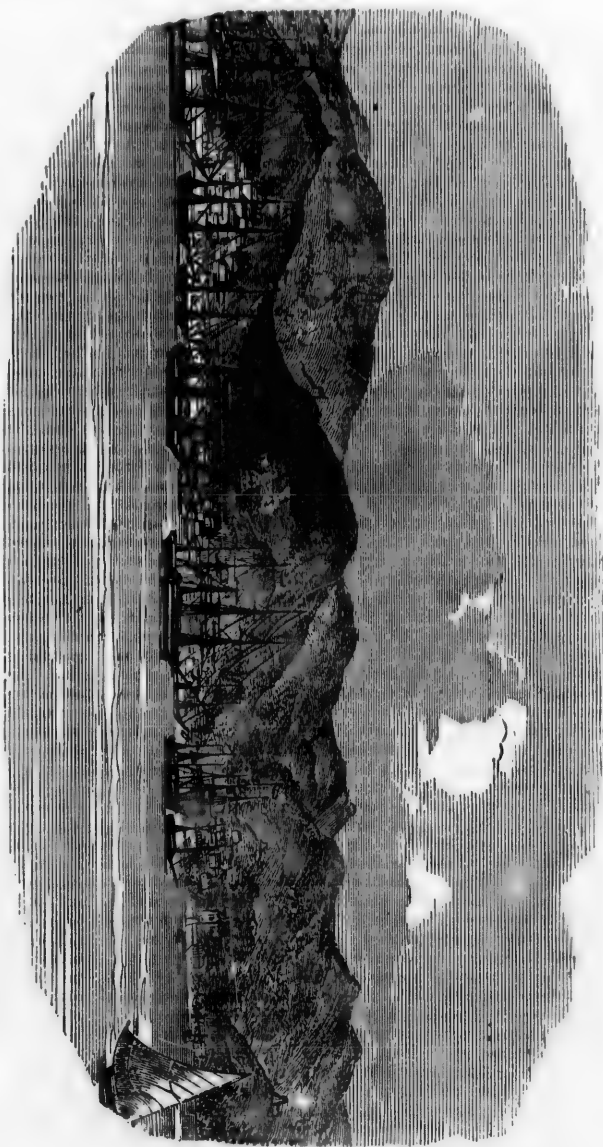
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View of St. Thomas, West Indies, from Wright's Wharf.



provements took place. Dr. F. Home showed that that part of the effect which milk produced in six or eight weeks, might be produced by weak sulphuric acid in twenty-four hours. This enabled the manufacturer to receive his bleached goods in a much shorter time than before, and therefore to trade with less capital.

The next important, and in fact we may say the important improvement in the art of bleaching, resulted from the discovery of chlorine. This gas was first separated from muriatic acid by Scheele and Berthollet about the year 1780; and one of the first properties discovered in the new gas, was an extraordinary power of destroying vegetable color. This fact was soon taken up by Saussure, James Watt, Professor Copland, and Mr. Henry, and other practical men, and a speedy revolution took place in the art of bleaching. There were, however, sundry objections made to the use of chlorine, on account of the offensive smell which it exhales. But it was discovered that the gas might be united with lime, whereby much of the odor was removed, without depriving the gas of its bleaching property. As a proof of the wonderful advance made in this art, Dr. Ure states, that an eminent bleacher in Lancashire once received fourteen hundred pieces of gray muslin on a Tuesday, which, on the Thursday immediately following, were returned *bleached* to the manufacturers, at the distance of sixteen miles, and they were packed up and sent off on that very day to a foreign market; thus effecting in two days what formerly occupied six months! We will now describe the present mode of bleaching cotton fabrics.

When the woven cotton passes to the bleacher, he has the pieces sewn up end to end into a longer piece five hundred yards in length, and stamps the owner's name on one end of each piece, which is done in a kind of ink formed of coal-tar. The cloth is then drawn rapidly over a hot iron, by which the hairy filaments of cotton are singed off without burning the cloth itself. The pieces of cloth are next folded up into an irregular bundle, and thrown into a large cistern of cold water, where they become completely soaked. When quite wetted, the cloth is put into a revolving hollow cylinder, by which it undergoes a process of washing: this prepares it for the reception of the bleaching materials.

A solution of lime is then prepared, by slaking quick-lime, and mixing it into a kind of cream with water: this cream is laid between the folds or a long piece of the cloth, and the whole is placed in a boiler, and boiled rapidly for several hours. This removes the paste which the cotton had received before being woven, and also the greasy spots which are likely to occur in the cloth.

The cloth is now prepared to receive the *bleaching-powder*. This is a *chloride of lime*, and is made on a great scale in manufactories devoted to that express purpose. To produce it, a quantity of slaked lime is spread out on a stone floor, and the apartment closed in perfectly air-tight. A leaden pipe leads from it to a large leaden vessel containing common table salt, black oxide of manganese, and dilute sulphuric acid. A chymical action takes place among these ingredients, especially when aided by heat; and the chlorine gas (one ingredient in common salt), becoming liberated, ascends through the leaden pipe, and unites chymically with the lime spread out on the floor. This, then, is the *bleaching-powder*; and in order to apply it to the cloth, twenty-four pounds are dissolved in sixty gallons of water, or if the quantity of cloth to be bleached be seven hundred pounds, three hundred and eighty-eight pounds of bleaching-powder are dissolved in nine hundred and seventy-one gallons of water. In this cold solution the cloth is steeped for about six hours; and on taking it out and washing it with water, it is found to be *partially* bleached.

The bleaching is further extended by steeping the cloth for a few hours in water containing a little sulphuric acid: this removes the oxide of iron which the cloth is apt to contain, and also the small portion of lime which is liable to adhere to it. The cloth is again washed in cold water, and again steeped for five or six hours in a solution of bleaching-powder, weaker than the first. Lastly, another steeping for four hours in water slightly impregnated with sulphuric acid, presents the cotton cloth in a purely white state. It will thus be seen that the cloth, even under the improved process, undergoes a complicated treatment; but if it be of inferior quality, some of the above processes are omitted.

But the labors of the bleacher are not yet ended; there are many *finishing* processes still to be done. When the last bleaching is ended, the cloth is carefully washed, to remove all traces of the acid, &c. It is then *squeezed*, to force out as much as possible remaining in the cloth: this squeezing being effected by passing the cloth between two rollers working closely on each other. The cloth is now damp and much crumpled; and the next process is to pull out each piece to its full breadth: this is done by women. But the edges of the piece still continue folded in. To make them straight, a workman strikes the bundle against a smooth beating stock, first one edge, and then the other. By this process the pieces are spread out to their full breadth, and all the folds and wrinkles removed.

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is done by passing it between rollers, by which it is made tolerably smooth and even, and ready for *starching* or *stiffening*. The starch employed for this purpose is made from flour with the addition of a small quantity of some earthy substance. It is mixed into a thick paste, and poured into a box or vat. The cloth is made to dip into this vat, and thus imbibe a portion of starch, and immediately afterward to pass between two rollers, which expel the superfluous starch, and work the remainder well into the pores of the cloth, by which it becomes thickened. It has been observed, "This method of thickening was undoubtedly intended at first as a fraudulent method of making the purchaser believe that the cloth was much stouter and thicker than it really was. But it has been so long practised, and is now so universally known, that all purchasers must be aware of it, and of course not in any danger of being deceived. But it certainly serves the purpose of making the goods appear much more beautiful, and of a stouter fabric to the eye; and as long as they continue unwashed, they are really stronger than they would be without this artificial dressing. So far it is beneficial; and as it does not enhance the price, the purchasers have no reason to complain of imposition."

The starched cloth is hung up in a heated room to dry: and is then ready for *calendering*, or imparting a smoothness and gloss to it. For this purpose, it is damped by being slightly sprinkled with water by an ingenious machine, and is then forced between two rollers, which press it very heavily. Different appearances, varying from that of a soft silky lustre to that of wiry texture, are given to it by varying the degree of pressure. The cloth is now finished, and is folded into a pile, with pasteboard and iron plates between the folds, and subjected to a heavy pressure, in a Bramah press. When removed from this press, the cloth is unfolded, and consigned to the respective owners.

Thus we see that the process of bleaching a piece of cotton involves more than twenty distinct processes; and yet the charge for the whole is less than one half-penny per yard! Such is the effect of combined improvements in mechanical and chymical processes; improvements which give to the large bleach-works of Lancashire an interest felt by both the man of science, and the intelligent observer who looks only to learn.

REASON.—Without reason, as on a tempestuous sea, we are the sport of every wind and wave, and know not, till the event hath determined it, how the next billow will dispose of us; whether it will dash us against a rock, or drive us into a quiet harbor.

IMPORTANCE OF SELF-KNOWLEDGE.

THERE is no theme upon which humanity can bestow its attention to more advantage, nor which imparts to its votaries, more real pleasure, than the pursuit of knowledge. But of all the various departments of knowledge, there is no one which carries with it more importance—which is so intimately identified with the welfare of each individual and hence with the general interests of humanity, nor which is more frequently neglected than that which constitutes the subject of the present article.

The duty of self-knowledge, has ever been looked upon, by the more intelligent of every nation, as indispensable to the temporal as well as spiritual interests of man. The ancient Greeks, though destitute of a knowledge of the Scriptures, were not insensible to its importance. But so deeply conscious were they of its noble and decidedly religious tendency that they caused the inscription, "Know thyself" to be consecrated in golden characters on the ancient temple of Delphos.

Even Cicero, the great Roman orator, attributed its authenticity to the gods, believing it to convey too much weight of sense and wisdom to be attributed to man. Such is the estimation in which it was held in the darker ages of heathen superstition. And corroborated, as it now is, by divine truth, it falls with increased weight at the shrine of every man's duty. "Stand in awe and sin not, commune with your own hearts upon your bed, and be still." Psalm iv. 4. "Examine yourselves whether ye be in the faith, prove your own selves, know ye not your own selves, how that Jesus Christ is in you, except ye be reprobrates?" 2 Cor. xiii. 5.

By self-knowledge, we understand a thorough acquaintance with our own nature—a thorough knowledge of our own character—our own abilities—the motives prompting us to act—the prejudices of our hearts—our duties, our thoughts, our virtues, and our vices. A thorough knowledge of these, will enable us to meet the responsibilities of life, and serve to promote our usefulness toward our fellow-men.

The man who diligently acquaints himself with the negotiation of his neighbors, and neglects his own business, becomes an object of censure. He who eagerly studies the history and anxiously regards the movements of foreign nations and pays no attention to the history and legislation of his own country, justly renders himself ridiculous in the estimation of every honest and intelligent citizen. So too, that man whose privilege it is to "stand midway between the kingdom of nature and that of immortal spirits," who might

recognise in himself one of the "highest beings in nature," who can look down upon and investigate everything below himself; who knows "the soil which he cultivates and the stars which regulate the seasons;" "who is the measure of the earth and all it contains, and who unites what is dispersed in nature, every power and every beauty in himself,"—although he eagerly drinks from the rich fountain of general knowledge, if he learns not to know *himself*, his frailties, his human weakness, his sinful nature, and at the same time his duties, and noble capacities, will after all seem awkward to the eyes of the community and subject himself to the censure of the world.

Man, as a relative being, stands intimately related to the world. And it is only when he brings his own personal peculiarities to harmonize with external influence, that he can properly meet the object of his existence. This, he can accomplish, only so far, as he is thoroughly acquainted with himself.

From the preceding, it follows, that self-knowledge constitutes the foundation rock of the lofty structure of general knowledge. Without it, the structure, like the house on sandy bottom, will be subject to foreign influence, driven here and there at pleasure, having nothing fixed nor stable, and the subject himself will be disqualified for his responsibilities and duties.

Knowledge, we are told "puffeth up and maketh man proud and haughty." This charge is perhaps not groundless when the subject is not acquainted with himself. But self-knowledge which reveals the hidden evil of our hearts, looks into the secret recesses of our minds and exposes to our view our faults and imperfections, is calculated to humiliate and subdue our naturally haughty spirits. It exerts a healthful influence over our general character, awakens the nobler feelings of the soul, and enables us to frame our actions in such a way that they will adorn our station. Hence the necessity, and in the first place, of a thorough acquaintance with our nature.

In the contemplation of our nature, we have presented before our minds a picture, at once, indeed rude and uncomely; but again, displaying all the beauty, magnificence, and splendor imaginable. We behold in it, the dark valleys of depravity, the deserts of sin, and the polluted swamps of iniquity, without a ray of light to reveal its hidden beauties, or a single flower to shed its fragrance round. Its rich stores and treasures lie buried beneath the fragments of its own ruin. We see it deserted by all that is good and amiable, and abandoned to the frowns of an incensed Deity. Such is the first stage of human nature. But again,

cultivated by the skilful hand of an all-wise Providence; fertilized by the rich stores of his goodness, and watered by the refreshing streams of long-suffering and forbearance, it is brought to bloom and blossom as the rose. Its hidden beauties are brought to light, and its rich stores and treasures prominently presented to our view. As we contemplate it, we learn to appreciate its worth. We see its superiority over the nature of the animal. "We discover in ourselves, apart from our bodies which we have in common with the animal, mind immortal and rational in its nature, which traverses almost infinity of space, and elevates us far above all other creation."

We also "discover in ourselves capacity for reflection, penetration, and study, together with many other mental operations of which we have no symptoms in the animal." Thus the contemplation of our nature has, in the first place, an humiliating tendency. And as we learn to know ourselves the deep-toned chords of our hearts swell with sympathetic feeling when we see others deviate from the path of duty in which they were wont to tread. Again, as we contemplate its beauty and worth we learn to appreciate the power, the glory and the goodness of Him who has cultivated its barren wastes, endowed it with those noble faculties, impressed upon it his own image, and exalted it even to the attainment of his favor. Conscious of our entire unworthiness, and of the goodness of God as manifested toward us, we also feel the debt of gratitude we owe to him for our deliverance. Aided by the power of the Holy Spirit, and the light of the gospel, we endeavor to discharge this debt by bringing our bodies and minds and all we are in conformity to his will. This conviction originating, as it does, from a sense of gratitude, love the most noble feeling of the soul becomes the moving spring of our actions and sheds forth a happy influence which may tell to the eternal interests of those with whom we associate. These, kind reader, are some of the advantage derived from this department of self-knowledge. How important then that we should contemplate our nature.

Again: we should familiarize ourselves with our character. It is strange, and yet true, that men are exceedingly deficient in this department of science. The man who has not attended to this department of self-knowledge frequently finds himself involved in difficulties the most unpleasant. We are much disposed to estimate the character of others, by our own, and where this is not fairly understood, the estimate must necessarily be unjust. We frequently condemn others for the same faults of which we ourselves are guilty, or offend at small blemishes in the character of another while we look with perfect satisfaction upon

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much greater ones in our own. This is the result of self-ignorance. It is only when men are brought to understand their own character that they can form a proper estimate of that of another. And would we be useful and consistent ourselves or to others we must understand our character. Upon a moment's reflection the truth of this position will be manifest. "Affectation," says a popular writer, "is the spring of all ridicule, and self-ignorance the true source of affectation." This fact bears with as much weight and importance. He who knows not himself, knows not what will beautify and adorn his character, and proudly desiring to appear to the best advantage frequently affects one entirely different from his own, and thus acting either above or beneath himself, in either case becomes equally ridiculous in the estimation of the wise. The man, however, who understands his character, views it in its proper light. He estimates it according to its moral worth, and thus conducts himself in a way becoming his station. Not influenced by the vain notions of noble birth, though he possess all the power, wealth can bestow, he feels that an adverse change of fortune can bring him to circumstances of want; that he too is a man subject to all the faults, sorrows and trials of his race, and hence he condescends to all, though humble, yet amiable, noble, and worthy deeds; "but in his condescension there is a true dignity which elevates and exalts him in the estimation of the world."

Another and important part of self-knowledge is, a thorough acquaintance with our abilities. Many of the censures, disappointments, and sorrows of life are to be attributed to self-ignorance in this view. It has pleased Providence to award to every man certain capacities and talents which develop themselves and, if properly understood, serve to promote his usefulness in the world. The man, however, who is unacquainted with these capacities neither knows what he can, nor what he can not do. Hence he either spends his days in careless inactivity, or influenced, as men frequently are, by a vain desire to display, presumes to undertake what he by no means has power to accomplish. Thus vainly endeavoring to grasp such laurels as lie far beyond his reach, in order that he may decorate his brow with wreaths of honor, he precipitates himself headlong down the craggy rocks of public censure, each successive tumble bringing him nearer and nearer the final gulf of dishonor and disgrace. Thus we frequently find men of very ordinary capacity endeavoring to fathom the deep principles of philosophy and reveal the faults and errors of others, with whose minds were their own to be compared, they would be almost as a

drop to the ocean or the veriest atom to a world.

Who, that has read Horace's epistle to Pison has not been struck with the truth, the weight, and importance of his suggestion as contained in the following extract:—

"Examine well, ye writers, weigh with care
What fruit your genius, what your strength can bear,
For when a well-proportioned theme ye choose
Nor words, nor method shall their aid refuse.
In this, or I mistake, consists the grace
And force of method, to assign a place
For what with present judgment we should say,
And for some happier time the rest delay."

He who knows his abilities contemplates well before he begins whether he will be able to perform, and in so doing never ventures beyond his legitimate sphere. Though anxious to meet the responsibilities of life, and willing to endure the toil and labor of civil, literary, and religious warfare, he is careful to observe that the means at hand are adequate to the object proposed.

Again, there are no faults to which we are more subject and yet less conscious of than our prejudices. These, though latent, present the greatest barriers to a fair and honest judgment imaginable. To know and understand these constitutes another important part of self-knowledge. The circumstances of our youth, our general system of education, and the selfish disposition of our hearts, all seem to exert a prejudicial influence over our minds. This is manifest from our early disposition to cling to one system of opinions on religion, politics, or philosophy, and reject the other while in reality we scarcely understand the principles of either. This is not the result of fair and honest investigation, but of mere speculative notions imbibed according to the peculiar circumstances with which we are surrounded. This disposition, if permitted to flow on uninterruptedly, naturally develops itself, and finally so perfectly overshadows and biases our minds as to render them "impenetrable by the rays of truth or light of reason." But apart from external influence prejudices frequently arise from a vain conviction of our own good sense and understanding. Hence we form notions and invent plans, and supported by a good share of self-esteem, proclaim them to the world confident of their excellence and superior merit. Should however, another, whose mind is less darkened by the black mantle of self-sufficiency, detect and expose their faults, though it be with all possible kindness, we immediately attribute it to ill will, envy, or ignorance on his part and proudly resent it, never dreaming that the fault might after all lie with ourselves. Such, however, is not the case with the votary of self-knowledge. His object is truth. And does he discover a plan or advance an idea he

views it well by the scrutinizing eye of honest judgment, weighs it in the balance of sound sense, and impartially compares it with the fair standard of truth, and does he, or another discover that it is wrong, he nobly renounces it, and, grasping the lingering ray of truth, rejoices that his mind may again move in that pleasing element so congenial to its growth.

Reader, be persuaded to devote your attention to this important duty. Make it a frequent theme of contemplation. Learn to know yourself, and you will go forth in your respective pursuits with increased interest and delight. You may sit by the still fountains of literature, rove over the beautiful plains of art, or ascend the lofty hill of science, and in all these you will discover new charms, and new beauties. It will adorn your actions, which honorable, noble, consistent, and becoming your station, will elicit public favor and approbation. It will be to you a fountain head of noble deeds. It will strew your path with fragrant flowers, and finally, when you stand upon the verge of the eternal world, you will look back with pleasing recollections and recall the happy day when you first resolved to make *self-knowledge* a theme of contemplation.

LITERATURE OF THE JEWS.

THE indebtedness of the literary world to the Israelites, has not been generally recognised nor realized by Christian scholars. To illustrate the obligations of literature to the Jews, we need not dwell on the fact that this people were the penmen, and the chosen depositaries of that wonderful book which contains the only reliable history of the world for many centuries, and which has more sublime and beautiful poetry, and more valuable moral instruction than all other books—though this should entitle them to the lasting respect of the world; for ever since the dispersion of the Jews among the Gentiles—by whom they have been a despised and persecuted people—the children of Israel have distinguished themselves by their pursuit of literature.

In the darkness of the middle ages, they interested themselves in the studies of the Arabs, who for successive ages, were the sole patrons of learning, and by means of translations into Hebrew and Latin, diffused a knowledge of the sciences through the different countries of Europe in which they resided. Even previous to the ninth century the Jews produced several original works on morals and philosophy.

In the tenth century science was assiduously cultivated by them in Spain. At Toledo,

they had schools which were greatly celebrated and crowded with scholars, no less than twelve thousand pupils attended them. In mathematics and astronomy, there were no schools in Europe that could compete with those at Toledo. Aben Ezra, a Jew, was the inventor of the method of dividing the celestial sphere equatorially; and it is said that in some of the philosophical treatises by the Jews of that period, allusion is made to that important principle in the Newtonian system—the attraction of the heavenly bodies.

What was true of the Jews in Spain, was likewise true of their brethren in Portugal, Germany, Italy, France, and elsewhere; everywhere during the ages of darkness and general ignorance, the dispersed Israelites were the zealous cultivators and successful teachers of the important sciences.

They were also distinguished for their knowledge of medicine; and notwithstanding the bitterest persecutions with which they were everywhere visited, they supplied physicians to most of the kings of Europe, and even to some of the popes of Rome.

Thus were the Israelites the cultivators and transmitters of learning through the entire period of darkness and gloom which enveloped the minds of men during successive centuries. As they had been the faithful depositaries of those sacred books so invaluable to men, thus were they also, under Providence, not only the depositaries, but, from their peculiar condition and dispersion, the propagators of human science and knowledge in all the kingdoms of Europe.

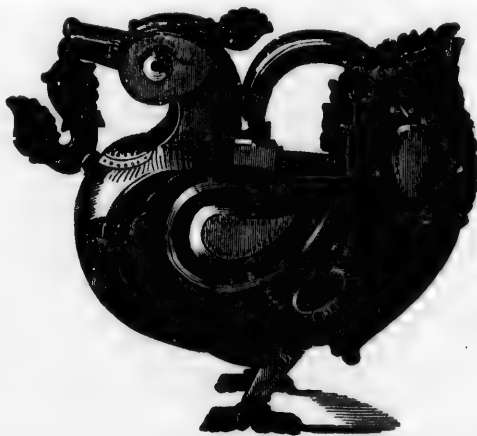
These facts are deeply interesting if not new, and are suggestive of the debt of gratitude which the Christian world owes to the still dispersed and despised descendants of Abraham.

DOMESTIC ECONOMY.—*The wetting of coals is very false economy, as, though they burn slower, a great deal of heat is wasted in drying, and carried off in the steam.*

In airing rooms, both the upper and lower parts of the window should be opened, as the bad and heated air, from its lightness, will pass out at the top, and the fresh cool air come in at the bottom.

A blanket is a cooler covering than a sheet in summer, because it allows the perspiration to escape. Sheets feel cooler at first, because they carry off the heat of the body quicker; but when they become as warm as the body, they feel warmer, by confining the perspiration.

Roast meat is more nutritious than boiled, as in boiling the gelatine is extracted, and dissolved in the water.



Indian Lock.

INDIAN LOCK.

THIS curious lock is in the form of a bird; probably, representing the Hindoo god, Garuda, the carrier or bearer of Vishnu, the second of the Hindoo triad, Garuda being to Vishnu what the eagle is to Jupiter. Garuda is worshipped by the natives of Madras; and, his living type, a kind of large hawk, is diligently fed by the devotees: the writer has often seen the worshippers with little baskets, filled with flesh, which is thrown skilfully, a small piece at a time, into the air, while they shout, "Hari! Hari!" a name of Vishnu, and the bird stoops on the wing and takes the prey. Garuda is supposed to possess human, or, rather, divine, intelligence, and is much revered. Many stories are told of his discernment and cunning; and it is, probably, on this account that the native artist has made his lock in the form of Garuda, a sufficient guaranty, in his notion, for its acting as a safety or detector, equal, or even superior, to the more mechanical and scientific inventions of Bramah or Chubb. We should add, that, in this Indian lock, the keyhole is on the side, one of the wings of the bird serving as a shifting escutcheon.

HOW TO LIVE.

NERVOUS INDULGENCE.—All nervous and melancholy people should not only seek occupation to divert self-reflections from their leading grievance, but determinedly not think

of it, even though they can find nothing else to do. Ever-present apprehensions, misgivings, and even sensations, are the growth of habit, as much as the musician is always singing, the poet rhapsodizing, or the artist sketching. No man can do two things at once, any more than a man can be at two places at the same time; and hence, engage but the mind in a new task, no matter whether it be to count a hundred or set off on an errand, and the dull thought will give way to the circumstance of the moment. We contend it is possible in this way to subdue grief—to avert distressing reflections, and to struggle against difficulties. There are a thousand occupations that might engage the best of us, successfully too, if we inquire into and can find our capacities. Learning a language—studying music—singing—horticulture—dancing (a most excellent device)—drawing—opera—sight-seeing—riding and driving out—telling (above all others)—jaunting—making excursions—following the pleasures of the day; and if none of these possess attractions, it is unwise to indulge in the one thought—for brooding rivets the malady, and the chances are against our ever resuming the position in life we have fallen from.

Think of the shortness of life, and what a piece of extreme folly it is to waste an hour in heedless lamentation and woe. Fretting never repaired a loss—never filled up a chasm—never mended a broken limb—never smothered a fire. The moment a circumstance is past—if it be inimical, set instantly, like the bird with its stolen nest, to repair it. The mischief often happens for the best.

ON EXERCISE, HORSE-RIDING, AND GYMNASTICS.—Nothing can exceed the value of exercise. Nature made man to be moving as birds are made to fly; and it is unnatural not to use the powers we are supplied with. In walking—which is before every other action, except horse-riding, and that, by-the-by (only we are told “all things are made for our use”) is, by some, a questionable right of man’s authority—every muscle is brought in play. In consequence, the blood circulates with greater force and rapidity; and so long as we do not excite the same too powerfully, so long may we walk and move about, short of fatigue.

Horse-exercise is sanatory and recreative. Healthy from securing thereby abundance of exercise—getting over distances and far into the country, procuring thus fresh air and mental occupation—and of an agreeable kind; because the very management of a steed requires some little address and attention. It strongly behooves all dyspeptics to whom time is an object, and who, besides, may not be strong enough to walk two or three miles, to secure by hook or crook, a cob or a poney. The anxious man may plead expense as a hindrance; but surely the hiring might be substituted in the case for purchasing: more also is made of the latter than need be. Seventy or eighty dollars will be begrudged for a horse; whereas the same money will be spent in a feast, or parted with in an incautious credit, or laid aside for some little unnecessary extravagance. Many a man has to reflect, that it would have been better for him to have bought his horse, than to have done so and so with his money.

Where ambling and cantering are quite impossible, and a two-legged conveyance is all that can be commanded, pray, my friend, be you invalid or otherwise, use it; do not “stick” indoors all day, but make an effort and get over, by gentle or brisker efforts, some three or four miles a day. If your business confine you from eight till eight, or six till six, there is still time left before and afterward. Have that to yourself, and spend it in walking in the sun, if possible, at least in the air, and where you can, as far from town or narrow streets as may be.

There are thousands of people whose only complaint is want of exercise. A bloated paunch may, by exercise and abstinence, be rendered classically spare and elegant. The “city ‘prentice,” the friendless youth, or the young gentleman, all of whom service, restraint, or indolence, forbids stepping beyond, scarcely, can it be called, in and out of bed, what would they not derive from a couple of hours’ daily walk in the fresh air? It would make a hero of each—every lad might become a Whittington—many of them mayors. The

pale face, bloodless lips and sunken eyes of many a young maiden, also might be restored to roseate health, by an hour or two’s morning walk in the parks, or the high roads, or the fields: and how it behooves fathers and mothers to insist upon their daughters that need it, doing as much, if the young ladies have no faith in the means themselves.

Our time should be thus distributed: *eight hours’ rest—eight hours’ application to our engagements, studies, worldly duties, and the remaining eight to health and recreation.* This is a good division where practicable.

THE FLESH BRUSH.—Horse-hair gloves, soft and hard brushes, to rub the body with, or friction or shampooing of the same, with the uncovered hand, are severally recommended by medical men. I am a believer in the usefulness of each variety; but I give preference to the latter, the use of the hand; and I advise its application, local and general.

Friction of the abdomen, in cases of torpid liver, distended bowels, or a morbidly irritable stomach, is of great service. It will not, however, suffice merely to rub the hand over the belly half a dozen times. The bowels, liver, and stomach, should be regularly kneaded, for at least fifteen or twenty times every day; the easiest times certainly are, before rising and on going to bed; but the best time is between meals, when the food is all but digested.

In young and delicate persons, friction of the entire body is highly serviceable; and it is no bad additional morning and evening amusement for an adult to use the “hair brush” or the “flesh brush,” or the hand, which is the best, over legs, arms, and entire body. The advantages of this process are, that it can be done without assistance; but with elderly and infirm people, a rubber is indispensable. The result will be, that all the digestive organs will be excited into something like action. Where exercise is forbidden, by involuntary confinement or other causes, the shampooing supplies its place; but it must be continued (it will not hurt) all the year round; and it should form a species of gymnastics, night and morning, from five to ten minutes more or less each time. The stomach receives thereby a glow that diffuses itself over the entire abdomen; and I have known cases of constipation most agreeably relieved by the same.

The use of dumb-bells is salutary, as indeed are all gymnastic recreations, lifting light weights, suspending the body by the hands, swinging, skipping, etc., etc. Battledore and shuttlecock is an excellent game for grown-up people. Get into an unumbered room, or a courtyard, and alone, or with a playmate, determine to number a thousand jerks of the feathered cock. Never mind the seeming

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puerility of playing "with trifles light as air." You will get into a wholesome glow, and derive much amusement at the fun of it. "Let those laugh who win." Cricket is a splendid game; bowls an amusing one; billiards, if played only for friendly contention, are mentally recreative and physically useful. In short, whether you be man or woman, boy or maiden, old or young, move about and take exercise in the best way you can, and as much "unhoused" as possible. Exercise is positively a virtue; and "virtue is," as the school-boy's copy has it, "its own reward."

ZOOPHITES, OR PLANT ANIMALS.

THESE wonderful productions are so denominated, on account of their existing in the shape of plants. They are very numerous, and the greater part of them have so great a resemblance to vegetables, that they have generally been considered as such, although the horny and stony appearance of several of the tribe, declares them at first view, to be of a widely different nature from the generality of plants. In others, however, the softness of their substance, and the ramified mode of their growth, would lead any one not acquainted with their real nature, to suppose them vegetables. The hard, horny or stony zoophites are in general known by the name of corals; and of these several distinctions are formed, either from the structure and appearance of the coral or hard part, or from the affinity which the softer or animal part bears to some other genus among soft-bodied animals, or mollusca. The zoophites may be therefore said to unite the animal and vegetable kingdoms, so as to fill up the intermediate space.

Belonging to the class of zoophite worms, the fresh water polypes are infinitely curious. These animals may be found in small streams, and in stagnant waters, adhering to the stems of aquatic plants, or to the under surface of the leaves, and other objects. If a polype be cut in two parts, the superior part will produce a new tail, and the inferior part a new head and arms; and this, in warm weather, in the course of a very few days. If cut into three pieces, the middle portion will produce both head and tail; and in short, polypes may be cut in all directions, and will still reproduce the deficient organs. The natural mode of propagation in this animal, is by shoots or off-sets, in the manner of a plant; one or more branches or shoots proceed from the parent stem, dropping off when complete; and it often happens that these young branches produce others before they themselves drop off

from the parent; so that a polype may be found with several of its descendants still adhering to its stem, thus constituting a real genealogical tree. The polype, likewise, during the autumnal seasons, deposits eggs, which involve themselves afterward into distinct animals; and thus possessing two modes of multiplication. It seems paradoxical that a polype should be able to swallow a worm, three or four times as large as itself, which is frequently observed to happen; but it must be considered that the body of the animal is extremely extensible, and that it possesses, in an extraordinary degree, the power of stretching itself according to the size of the substance it has to swallow. It seizes its prey with great eagerness, but swallows it slowly, in the same manner as a snake swallows any small quadruped. The arms of a polype, when microscopically examined, are found to be furnished with a vast number of small organs, apparently acting like so many suckers, by the means of which the animal can hold a worm, even though but slightly in contact with one of its arms; but when on the point of swallowing its prey, it then makes use of all its arms at once, in order to absorb it the more readily.

Corals, on being gathered perfectly fresh, and planted in sea-water, appear to put forth small flowers from all the minute cavities, or hollow points on the surface. These supposed flowers (for such an idea has been entertained) are real animals; and consequently corals are to be considered as aggregates of animals, either forming, or at least inhabiting the calcareous substance of the coral in which they appear. The smaller corals, commonly known by the name of corallines, or sea-mosses, are so many ramified sea-polypes, covered with a kind of strong, horny case, to defend them from the injuries to which they would be liable, in the boisterous element destined for their abode.

The harder, or stony corals, are equally of an animal nature; the entire coral continuing to grow as an animal, and to form, by secretion, the stronger or horny exterior which may at once be considered as its bone, and the habitation in which it has constantly to dwell. A coral of this kind is therefore, a large compound zoophite, springing up from the rock, in which it seems to have taken root, and shooting out into branches like a vegetable production.

Sponges afford another curious instance of zoophitic life. There are forty-nine species of this zoophite, each of which is characterized in the Linnæan system as a fixed animal, flexible, torpid, of various forms, composed of either reticulate fibres, or masses of small spines interwoven together, and clothed with

a gelatinous flesh, full of small mouths on its surface, by which it absorbs and rejects water. The existence of the animal inhabitant within its cell, has been satisfactorily ascertained by the observations and experiments of Ellis, on the *spongia tormentosa*. He remarked its contraction when exposed to pain or injury, as well as the expiration and inspiration of water through its tubes. He thus established the position that sponge is an animal, and that the ends or openings of the branched tubes are the mouths by which it receives its nourishment and discharges its excrementitious matter. This position chymistry has since abundantly supported, by proving the ammoniacal property of the cellular substance of sponge.

BELEM, OR PARA.

THE city of Belem, to which our illustration refers, is situated at the entrance of one of the largest ana-branches of the river Amazon, and in a position to influence greatly the future stream of commerce, which will doubtless vivify the present boundless wastes and impenetrable forests of the interior of South America. The capabilities of this quarter of the world are at present little known, though the public attention of several European countries has of late been directed to the subject. The recent expedition under Sir R. Schomburgk, has been followed by one instituted by the desire of the French government, not to be behind us upon the subject of correct geographical and general information as regards Central South America. From sources such as these, we learn that in this neighborhood, extensive forests of wild cocoa exist, and nowhere has nature developed her riches in a more lavish manner; it is impossible to imagine the diversity and extreme beauty of the trees, and particularly the palms which form these forests. The creatures that animate the countries are not less remarkable for their singular forms than the brilliancy of their colors—the jaguars, the tapirs, the ant-eaters, the tatons, more than twenty species of monkeys, birds of the most dazzling hues, couroucous, colingas, and parrots, show themselves in every part. The former has on its head a singular crest, in the shape of a parasol, and the second displays in its plumage all that the sun of the equator can produce in purple, emerald, and gold. These regions also abound in magnificent woods, and produce in abundance everything required in ship-building; such as birch, hemp, and excellent cordage, made of the fibres of the palm-tree, and capable of

resisting the action of water in a surprising degree. Vanilla is also plentiful, and the Indians gather large quantities of wax and resin. The forests contain, besides, dye-woods of various kinds, and in considerable quantity.

THE SELF-TORMENTORS.

THERE is no situation in life for which candidates will not be found to offer themselves, no matter how degrading or disgusting it may be; and it is indeed most fortunate that there are those whose habits and tastes are not too refined for occupations which to others would be absolutely appalling, for thus no department is left unfilled: the hangman is never sought in vain; the scavenger spends his days amidst the filth of the streets, and does not hold himself one whit the worse; butchers are not loath to slay; and surgeons perform amputations *con amore*. The acquirement of the means of subsistence stimulates all, and thus the business of the world is conducted with undeviating completeness. But there is a class of human beings, and no inconsiderable one, who devote themselves to hardships, and submit to privations, from motives wholly apart from the desire to earn a livelihood. This is the class of self-tormentors. Some of the most extraordinary examples of these are to be found among the Fakirs, who, from their strange tenets respecting the Deity, and the sacrifices which they think pleasing to him, inflict the most severe tortures on themselves. Some of them make a vow to continue for life in one posture; others carry a weary load, or drag a heavy chain, from which they have vowed never to disengage themselves. Some have doomed themselves to crawl upon their hands and knees for a term of years; and others roll their bodies along the ground, from the shores of the Indus to the banks of the Ganges. Some have condemned themselves to swing before a slow fire for the remainder of their days; while others suspend themselves with their heads downward, exposed to the fiercest flames. Many of the Hindoo fanatics, pledged by a religious vow, are to be found at the villages where the ceremony of swinging is observed at stated times. It is thus contrived: in the centre of an area a pole of from twenty to thirty feet high is erected, on which a long horizontal beam is fixed, with a rope run over a pulley at the extremity; to this rope an iron hook is fastened, which being run through the integuments of the swinging devotee, he is suspended high in the air, a spectacle of admiration to the assembled multitude, who

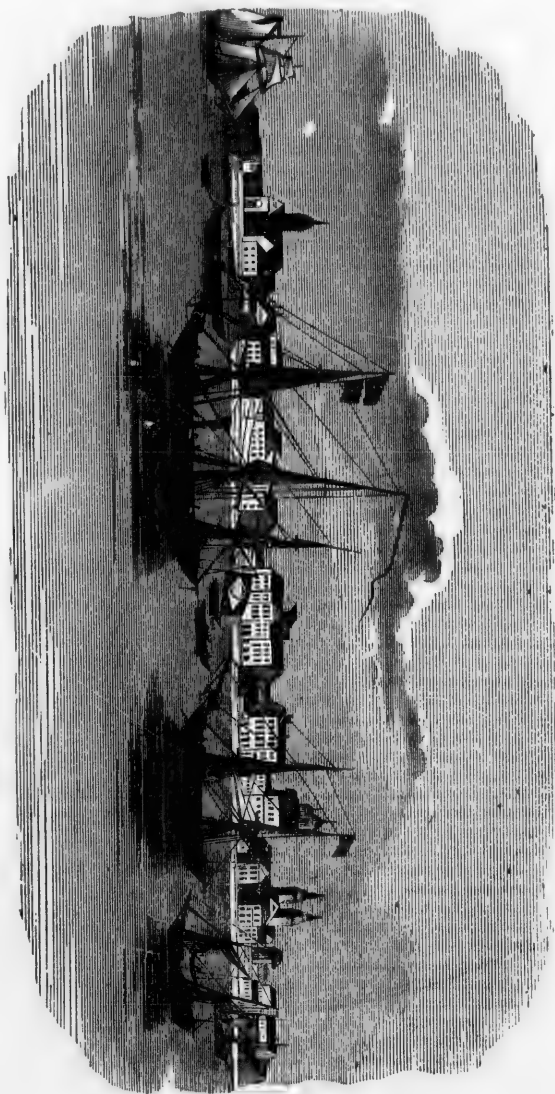
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The City of Belém, or Para, on the Estuary of the Amazon River.



testify their approbation by the loudest acclamations: the more violently he swings himself round, the more vehement is the applause: the flesh often gives way, and the unfortunate performer is released by a precipitate fall, very frequently at the expense of a broken limb. The voluntary sacrifice of the Hindoo widows to the flames is too well known to need any description of the ceremony here. There are many devotees, who, in the very prime of life, anxious to propitiate the Deity, resolve to bury themselves alive—no trifling sacrifice for those who might, in the ordinary course of nature, look for a long term of years. On the day appointed for the sacrifice, crowds assemble, a circular pit in which a man can stand upright is then dug, into which the self-devoted victim descends; the earth is then thrown over him, until he is completely covered; a massive tomb is immediately erected over the spot, where sacred rites are performed, and garlands of flowers are offered at stated intervals, in memory of the holy man who has sealed his devotion by this act of self-immolation.

The self-inflicted cruelties which take place at the festival in honor of Siva, a Hindoo god, appear almost incredible. The Hindoos who are to be the principal actors at the ceremonies, have assumed the name of Sunnyassias, and gone through some preparations for ten or fifteen days before the exhibition begins. On the first day of the festival, they fling themselves from a bamboo stage, which has three resting-places: the highest is twenty feet from the ground: bags of straw, struck with iron spikes, have been placed underneath to receive them: however, the spikes are so arranged, that they generally fall down, instead of entering the body: it sometimes, however, happens otherwise, and many persons have been killed and wounded by them. In some villages, several of these stages are erected, and two or three hundred have cast themselves on the spikes in the course of one day. On the third day of the festival there is a large fire made, opposite to the temple of Siva; and when the burned wood has been formed into a great mass, one of the chief Sunnyassias flattens it a little with a bunch of canes which he holds, and walks over it with his feet bare; the rest of the Sunnyassias then spread the fire about, and walk over it, and dance upon it, and throw the burning embers into the air and at each other. This pastime over, the next morning is appropriated to the work of piercing the sides and tongues. It is thus described by Mr. Ward, who went to Kalceghatu, in company with two or three friends, in the year 1806, to witness the rites.

"We arrived," he says, "above five o'clock in the morning. We overtook numerous com-

panies who were proceeding thither, having with them drums and other instruments of music, also spits, canes, and different articles to pierce the tongues and sides. Some, with tinkling rings on their ankles, were dancing as they passed along, while others rent the air with sounds of their filthy songs. As we entered the village where the temple of this great goddess is situated, the crowds were so great, that we could with difficulty get our vehicles along, and at last were completely blocked up. We then alighted, and went among the crowd; but who can describe a scene like this? Here, men of all ages, who intended to have their tongues pierced or their sides bored, were bringing garlands of flowers to hang round their necks or tie round their heads. There, others carrying their offerings to the goddess. Above the crowd were seen nothing but the feathers belonging to the great drums, and the instruments of torture which each victim was carrying in his hand. These wretched slaves of superstition were distinguished from others by the quantity of oil rubbed on their bodies, and by streaks and dots of mud all over them. Some of the chief men belonging to each company were covered with ashes, or dressed in a most fantastic manner, like the fool among mountebanks."

He goes on to describe the operation of piercing the tongue. "We went into the temple-yard, where two or three blacksmiths had begun the work of piercing the tongues and boring the sides of these infatuated disciples of Siva. The first man seemed reluctant to hold out his tongue; but the blacksmith, rubbing it with something like flour, and having a piece of cloth between his fingers, laid firm hold, dragged it out, and placing his lancet under it, in the middle, pierced it through, and let the fellow go. The next person whose tongue we saw cut directed the blacksmith to cut it on a contrary side, as it had already been cut twice. This man seemed to go through the business of having his tongue slit with perfect *sang-froid*. The company of natives were entirely unmoved; and the blacksmith, pocketing the trifling fee given by each for whom he did this favor, laughed at the sport. I could not help asking whether they were not punishing these men for lying. After seeing the operation performed on one or two more, we went to another group, where they were boring the sides. The first we saw undergoing this operation was a boy, who might be twelve or thirteen years old, and who had been brought thither by his elder brother to submit to this cruelty. A thread, rubbed with clarified butter, was drawn through the skin on each side, with a kind of lancet having an eye like a needle. He did not flinch, but

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lung by the hands over the shoulders of his
brother. We asked a man who had just had
his sides bored why he did this. He said he
had made a vow to Kallee at a time of danger-
ous illness, and was now performing this vow;
a bystander added, it was an act of holiness
or merit. Passing from this group, we saw
a man dancing backward and forward, with
two canes run through his sides as thick as a
man's little finger. In returning to Calcutta,
we saw many with things of different thick-
nesses thrust through their sides and tongues,
and several with the pointed handles of iron
shovels, containing fire, sticking in their sides.
Into this fire, every now and then, they threw
Indian pitch, which for the moment blazed
very high. We saw one man whose singular
mode of self-torture struck us much: his
breast, arms, and other parts of his body were
entirely covered with pins, as thick as nails or
packing-needles. This is called *vanu-phora*
(that is, piercing with arrows). The person
had made a vow to Siva thus to pierce his
body, praying the god to remove some evil
from him. Some Sunnyassis at this festival
put swords through the holes in their tongues,
others spears, others thick pieces of round iron,
which they call arrows; many, as a bravado,
put other things through their tongues, as liv-
ing snakes, bamboos, ramrods, &c. On the
evening of this day some Sunnyassis pierce
the skins of their foreheads, and place a rod
of iron in it, as a socket, and on this rod fasten-
ed a lamp, which is kept burning all night."

Such are a few of the self-inflicted tortures
borne by those who think that by such the
wrath of the cruel deity to whom they do
homage can only be appeased. The details
of bodily torments inflicted by the victims
themselves to propitiate his favor are so nu-
merous, that they might fill volumes; but
these limits are so brief to allow of a more ex-
tended notice of them; and for the present,
we will turn our attention to other self-tor-
mentors, who are actuated by motives of a
totally different nature. Such are impostors,
whose livelihood depends on the alms of the
charitable, who maim and disfigure themselves
that they may make a more forcible appeal to
compassion. It is no uncommon practice with
them to drive needles into their flesh, thus
to produce swelling and inflammation, which
can be displayed on fitting opportunities, and
turned to profit.

There was an unfortunate young woman, a
patient in Richmond hospital, Dublin, who
had to undergo amputation of the arm, it was
so dreadfully diseased from needles in the
flesh. She afterward confessed that she had
herself forced them into her hand and arm.
Four hundred needles were extracted from
different parts of the body of a woman named

Rachel Herz, of Copenhagen; they had re-
duced her to the most frightful state. It was
afterward discovered that she had herself in-
serted them purposely. There are others,
equally impostors, who have been known to
undergo the most acute bodily anguish with-
out flinching, impelled to it by having grown
weary of the way of life in which they are
engaged, and pining for a return to home and
friends. Deception under any exigency or
temptation whatever, is to be held in abhor-
rence; but certainly a touch of pity must
mingle with the feelings with which we regard
it under such circumstances. The hardships
which the soldier and the sailor are called to
endure, and the separation from home and
kindred, must teach us to look with compas-
sion while we blame; and the tortures which
they so unhesitatingly undergo, tell a melan-
choly tale of wearisome existence, and of
heart-yearnings after early scenes, that may
well suggest to the reflecting mind a hope that
some improvement in the mode by which their
services are procured, and the regulations by
which they are governed, may make such
guilt, if not impossible, at least of compara-
tively rare occurrence. With the desire of
being declared unfit for service, they have been
known to inflict the most serious injuries upon
their sight, and to mutilate themselves in a
frightful manner; something cutting off one or
more of their fingers, pretending that accident
had produced the mischief. A woman in
Dublin actually made a livelihood by selling
to the recruits a mixture of soft soap and lime,
which, on being applied as she directed, pro-
duced ulcers. Soldiers, anxious to be free,
have been known to make an incision in the
leg, into which a copper coin has been inserted,
and then bound up. So common was the
practice among the patients in the military
hospitals of tampering with their sore legs,
to prevent their cure, in the hope of procuring
discharges from the army, that the surgeons
were frequently obliged to seal the bandages
with which they bound them; but this has not
always succeeded, as the men often force pins
and needles through the bandages, so that at
last a box, with lock and key, was found ne-
cessary to keep the leg confined, so that it
could not be got at till the surgeon went to
dress it. Soldiers have often broken their
front teeth, to render it impossible for them to
bite the cartridges. A deserter who had been
arrested and put in jail, in the year 1811, sub-
mitted to remain in a state of apparent insen-
sibility from the 5th of April to the 8th of
July; everything to rouse him that could be
thought of was tried, but in vain; he took no
nourishment but a little that he sucked through
his teeth, as his jaw was fixed, and could not
be opened. The medical-people, supposing

there was some injury in the head, determined on an operation. The scalp was removed, that an examination might take place. So little did he appear sensible of pain, that a very slight groan was the only sign of feeling which he gave. His case being considered hopeless, he was discharged, and sent home to his father. A day or two after, he was seen butchering a hayrick!

There is a still more extraordinary class of self-tormentors to be found in those who are not excited by a mistaken zeal, or who have no chance of restoration to some cherished object, or loathing of some forced pursuit; but who, as it were, for a mere whim, or a sudden pique, consign themselves to lasting privations and torments, more difficult, perhaps, to be borne than bodily pain, because more enduring, and to the observance of which they adhere with a constancy worthy of a better calling. Miss Mary Lydia Lucrine is mentioned in "Dodsley's Annual Register" for 1778, as "a maiden lady of genteel fortune, who lived in Oxford street, London. She had been disappointed in love, and made a vow, in consequence thereof, never to see the light of the sun again. Accordingly, the windows of her apartment were closely shut up, and her vow was never broken. Another lady, under similar circumstances, and condemning herself in like manner, is mentioned in the same volume. She, like Mary Lydia, was disappointed in her matrimonial prospects, and vowed to live shut up from the light of the sun; however, very wisely, she made herself some slight amends, by occasionally indulging herself with the light of a lamp or candle, but she never admitted the rays of the sun into her presence again. From the same authority, in the volume for 1777, we also find the following curious account of the mistress of Beau Nash, in the notices of deaths: "Died at Bishop's-view, her native place, near Warminster, in Wilts. Juliana Papjoy, in the sixty-seventh year of her age. In her youth she had been the mistress of the famous Nash of Bath, and after her separation from him, she took to a very uncommon way of life; her principal residence she took up in a large hollow tree, now standing, within a mile of Warminster, on a lock of straw, resolving never more to lie in a bed; and she was as good as her word, for she made that tree her habitation for between thirty and forty years, unless when she made short peregrinations to Bath, Bristol, and the gentlemen's houses adjacent, to stay in some barn or outhouse." Not only was she the ablest selected by a man, but she lived in Dunstable in Suffolk; she was seen of a day seated on a chair reading the newspaper, in a large cage, which was placed in the middle of the town, and in which

he had lived for upward of thirty-four years, never quitting it. He resisted all the entreaties of his friends, who endeavored to persuade him to change his residence; and, true to the character of a genuine self-tormentor, he never left his strange dwelling-place. The cage was just large enough for him to live in, and in all respects but size was like the common cages sold for birds.

Ill success in love affairs appears to be the most frequent cause of extraordinary vows. Poor John Baker of Channing, the county of Kent, who was born in the year 1700, was but a laborer. It was his misfortune to fall in love at the early age of sixteen, and she he loved "proved untrue," whereupon John bound himself by a solemn vow never to take off his clothes, or to go to bed, till he should regain the affections of his mistress—a felicity to which, alas! he never attained; but, in accordance with his vow, he never took off his clothes, or rested himself in bed, for the rest of his life, which lasted for forty years. He never slept but in a chair or on the ground. The neighbors used kindly to put a patch upon his clothes when they saw that it was required, so that at the time of his death his coat was entirely composed of patches of every shade and hue. Even in this hasty sketch it is marvellous to see what torments have been voluntarily endured, what bodily anguish and what cruel privations have been perseveringly borne. But many as have devoted themselves to these tortures, there is a much larger class of self-tormentors than those already noticed; and that is, those tormentors who make the torturing of their minds the great object of life. Among them, the excitement attendant

on a spectacle which is to draw down the applause of an admiring crowd does not allure to the pursuit; the domestic circle is the favorite scene of its unostentatious display. They can not boast of the desperate precipitancy with which the poor Hindoo casts himself under the wheels of the car of Juggernaut, or the profound serenity with which the Fakir holds up his arm, without motion, till it dies and withers away, nor of the patient exertion of the devotee who rolls himself along from the shores of the Indus to the banks of the Ganges, nor of the careless tranquillity with which the Sunnyassi swings himself upon his hook. Happy, indeed, would it be if, like those who maim and excoriate their bodies, or who live apart in the hollows of trees, or in the cages hung up in the public streets, the mental self-tormentors kept their sufferings to themselves; but those who can not be happy without a misery, are too generous not to share their enjoyment with their friends and nearest of kin; for it may be observed, that those who suffer from imaginary injuries and grievances, draw

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are largely on those about them for sympathy than those who labor under real affliction. The pangs of the self-tormentor are many and sharp, and produce a constant state of effervescing agony. The forecasting of evil, and all the petty annoyances of piques, and affronts, and misconceptions, which one word might set right; and the mistrust of friendship, and the doubts of love, and all the nameless little caprices, and suspicions, and jealousies, and estrangements, and unreasonable exactions, which they engender, if to be touched on, would require a chapter, and a long chapter, to themselves. In very truth, they are of too grave a cast, and the cause of too much discomfort and unhappiness, to be longer dwelt on in a spirit of lenity.

MARRIAGE.

In nations most primitive and savage, marriage is the unceremonious appropriation of one or more females by the right of the strongest. We may suppose that the same was the case before the dawns of civilization. But very early in the history of our race, we find contracts made with certain impressive solemnities. Covenants were made memorable by an exchange of presents, still a custom among barbarous tribes, and the "know all men by these presents," preserved in forms of law, may bear such a meaning. Abraham made presents of sheep and oxen; the Phenicians, set up a pillar or raised a heap of stones; the Scythians poured wine into a vessel, mixed with it the blood of the contracting parties, and dipped into it a cimeter, arrows, a javelin, and with imprecations on whomsoever should break the agreement, the parties and their witnesses drank; the ancient Arabians cut their hands, and sprinkled the blood upon seven stones, invoking the gods; the ancient Medes and Lycians sucked the blood from each other's arms; the Nasamones drank with each other; the Greeks and Romans shook hands and swore by the gods, and the tombs of their ancestors.

But the most common pledge of good faith, is eating together. This is considered all over the world as a pledge of amity. A feast is, therefore, one of the earliest and most general modes of solemnizing a marriage contract; and for ages, and in many countries, it was the only one known. Marriage, as a religious ordinance or sacrament, has been recognised by but a small portion of the human race. It was such among the Greeks and Romans, who connected religion with all the actions of their lives, and invoked the gods in their most simple and familiar labors and pastimes.

All nations, of whom we have any historical account, ascribe the regulation of marriages to their first lawgivers. Thus Menes the first king of Egypt, is said to have first introduced matrimony, and fixed the laws concerning it; the Greeks attribute the same institutions to Cecrops; the Chinese to Fo Hi; the Peruvians to Manco Capac; and the Jews, to God himself. Mythology would seem to teach monogamy, though polygamy was occasionally the practice. Thus Jupiter had only his Juno; Pluto his Proserpine; Osiris his Isis; and the stolen amours of the gods, with the jealousies of their wives, point very significantly to the idea of confining the relation to a single couple, in theory, whatever irregularities of practice were tolerated.

But if we look back to the patriarchal ages, in the oriental countries, where the highest type of humanity is held to have its origin, we find polygamy to have existed time out of mind, and even in the lifetime of Adam, in the antediluvian period. In the early ages, a wife was of great consequence and value. Her labor was of great use, for from her skill in handicraft, men derived shelter, clothing, and many of the comforts of their simple life. When men were long lived, it was a great object to have many children, to take care of their flocks and herds, and for a defence against aggression. To be well served, therefore, and to insure a numerous progeny, men took a number of wives, and each wife strengthened the patriarch, by securing the friendship of the family from which she was taken. But as, in the order of Providence, men and women were born in nearly equal proportions, the demand for women caused a price to be set upon them, and the husband was obliged to purchase his wife, by paying a liberal sum; and this is still the case in China, where customs are petrified, and generally over Asia.

When the price agreed upon was paid, the marriage was celebrated with a feast. Laban gathered his friends, and bade a marriage feast, when he pretended to give Rachel to Jacob, for seven years' labor, and then defrauded him by placing Leah in the nuptial bed, instead of her more beautiful sister, whom he married seven years afterward. Samson, when he married Delilah, gave a feast which lasted seven days. The Babylonians carried the splendor of their marriage-feasts to such an extravagant and ruinous extent, that they had to be restrained by law. Among the Scandinavians, the celebration of a marriage, was a scene of revelry and drunkenness, frequently productive of the most deplorable effects. Such was the custom among the Jews in the time of Christ, and to this day, and in nearly all countries, marriage is celebrated with feast-

ing and festivity. The following Jewish form of marriage contract, is probably the oldest in the world.

"On such a day, month, and year, A, the son of B, has said to D, the daughter of E, be thou my spouse, according to a law of Moses and of the Israelites, and I will give thee as a dowry for thy virginity, the sum of two hundred shekels, as it is ordered by our law; and the said D hath consented to be his spouse upon the conditions aforesaid, which the said A doth bind himself and all that he hath, to the very cloak upon his back; engaging himself to love, honor, feed, clothe, and protect her, and to perform all that is generally implied toward Israelitish wives."

This was the written form of betrothal, and in all respects a civil contract. A simpler form was by a verbal agreement, and the passing of a piece of money before witnesses.

The ancient Assyrians, in the front rank of eastern civilization, at a very early period, established laws of marriage, which were of a singular character. Once a year they assembled, at a great fair, all the marriageable girls of a province, when the public crier put them up for sale at public auction. First were put up the most beautiful, for whom the rich strove against each other, until the competition carried up the price to the highest point. When one beautiful woman had thus been disposed of, one less favored by nature was put up, and here the auction was reversed, the question was not how much will any one give, but how little will any one take, and he who bid her off at the lowest dowry took her for his wife, so that the price paid for the beautiful went to give dowries to the ugly, and thus husbands were provided for all. We often find nature making such a provision, since beauty and fortune are seldom united.

The great attention paid by the Assyrians to matrimony, is further shown by their having constituted a special court, or tribunal, whose only office was to see that young women were properly married, and that the laws of this relation were observed.

The custom of purchasing wives, for which we have given some reasons, appears to have generally prevailed as soon as the rights of property began to be respected, and bargained and exchanged commodities, instead of taking them by force. From the moment property was recognised, everything was considered as property, even to a man's wives and children. Men bought their wives, sold their daughters, and it is supposed, in many cases sold their children to service, since slaves were among the first articles of property and commerce known among mankind; and the sale of Joseph, by his brethren was no extraordinary circumstance at that period. The idea of property

in wives and children has never been lost and is fully recognised by our common law, which gives an action of damages for adultery and seduction. A man who runs away with another's wife is mulcted in so much money, and the same for the seduction of a daughter—though the legislatures of some of our states have recently added other penalties.

The regulation of the sale of wives by the Assyrians, which was an improvement upon their sale by parents, since it provided husbands for those who would not otherwise have been sought for, was not the only example in antiquity, of marriages being conducted by the state. The Thracians put up their fairest virgins to public sale, for the benefit of the government; and the magistrates of Crete exercised the sole power of choosing partners for their young men; and in the exercise of this power, interest and affection were overlooked—the good of the state being the only object of attention.

CURIOSITIES OF ARITHMETIC.

AN eastern prince was so much delighted with the game of chess, which had been devised for his amusement, that he desired the inventor to name his own reward. The philosopher, however, was too modest to seize the opportunity of enriching himself; he merely begged of his royal master, a grain of corn for each square on the chess-table, doubling the number in proceeding from the first to the sixty-fourth square. The king, honoring his moderation, made no scruple of consenting to the demand; but on his treasurer making the necessary calculations, he was surprised to find that he had engaged to give away the impossible quantity of 84,076,425,546 692,656 grains of corn, or near two hundred millions of bushels.

The story of the horseshoe is of the same kind, and like the above, is usually met with in books of scientific recreation. A man selling a fine horse is to receive for him nothing more than the value of the twenty-fourth nail of the animal's shoes, supposing that the first nail is worth a farthing, the second two, and so on doubling each time. The bargain is a tolerably good one, since the twenty-fourth nail at this rate, proves to be worth eighty thousand dollars.

Among the curiosities of arithmetical expression, may be mentioned that produced by the multiplication of any row of figures, no matter how extended, by the figure 9.—The product of such a multiplication, when added laterally, will invariably be even nines.

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REV. THOMAS TIMPSON,

OF LONDON (ENGLAND),

HONORARY SECRETARY OF THE BRITISH AND FOREIGN SAILORS' SOCIETY, AUTHOR OF THE
"COMPANION TO THE BIBLE," "THE YOUTH'S KEY TO THE BIBLE," "BRITISH ECCLES-
ASTICAL HISTORY," "MEMOIRS OF MRS. FRY," &c., &c.

ENGLAND TO AMERICA.

ADDRESS OF REV. MR. TIMPSON.

WE have much pleasure in presenting to our readers a correct and faithful portrait of the Rev. THOMAS TIMPSON, of London, the author of many valuable works, and the founder of various benevolent movements in that great emporium. His address to the citizens of the United States, will be found an invaluable document, and well worthy of a careful perusal, by every lover of his race. Every document like the present adds, as it were, another link between the United States and the parent land, tending greatly to strengthen, perpetuate, and cement those good feelings which now subsist between our respective nations.

The Rev. Mr. Timpson has enlarged so eloquently on the blessings of a "union of the two countries," which must, in all probability, continue to grow out of an increased intercourse between them, as to leave us little room for remark. But we feel desirous to add our humble testimony respecting the navigation of the ocean by steam. The idea of a "flying bridge" across the wide Atlantic, was only a few years ago deemed an impossibility. Now we have a weekly communication with the old world, and additional steamers are in progress of building. The enthusiastic reception our first American steamer met with at Southampton and Bremen, where all classes vied with each other in doing her honor, sufficiently indicates that our brethren abroad are equally alive with ourselves to the incalculable benefits arising from our ocean-steamers on both sides. Like a weaver's shuttle, may they continue to pass to and fro across the Atlantic, weaving a web of forgiveness, love, and friendship, between the two nations.

LONDON (Lewisham), Dec. 16, 1847.

TO ROBERT SEARS, Esq.—*And the worthy Citizens of the United States of America* :—

"During about half a century, from my childhood, I have felt an intense interest in your great and celebrated country; and that interest has been much heightened and increased from the first by all that I have since heard and read of the history of its discovery, the principles of its early colonists, the establishment of its independence, and the unexampled progress of America, as indeed a 'New World.' But, for many of the latter years, my mind has been more closely drawn to your people by various considerations. Among these are, their descent, chiefly, from my own forefathers: in Britain; the identity of our origin, our language, our institutions, and our divine religion; from the fact of many of my own friends having settled in your

country from personal acquaintance with some of your learned ministers of the gospel; from correspondence with others; from the writings of your divines; and especially from the honor which your people have done me in republishing several of my volumes for their edification in things relating to the Holy Scriptures. I must not omit to notice, particularly, my 'Bible Companion,' with an 'Introduction by the Rev. Dr. S. TING, of New York.'

"At present, however, my design is not to dwell on either of these topics, but to frame an appeal to your whole people, to cherish that spirit of union between our two nations, which will benefit the entire human family, and secure to all the blessing of God. My desire is to assure the American people of the interest cherished by my countrymen in the welfare of America, and to excite, or rather to promote a spirit of mutual and fraternal regard and unflinching confidence between Britain and America. It is true, that several classes in this kingdom look across the Atlantic through different media; but all with profound admiration of your people, and the highest anticipations of their future glory. And as I have the means of knowing their views, I may briefly advert to the more important classes, severally, with some degree of propriety.

"1. **BRITISH MERCHANTS.**—These may justly be supposed to have a peculiar interest in the prosperity of America. Such is the fact. A large number of this influential class there are in Britain, whose wealth has principally been derived from the American trade. My earliest notions of mercantile affairs are identified with honored men who were engaged in important transactions with America. I need only mention the names of Baring and Brown, and our Alexander Baring, now the Right Honorable Lord Ashburton, and his special mission to your government, in forming a recent treaty, to prove the deep interest that is taken in the welfare of America by British merchants.

"2. **BRITISH MANUFACTURERS.**—Thousands of these, in different districts of our country, look to America with the utmost solicitude for its peace and progress, as individually interested in the prosperity of its people. *I am a native of Birmingham*, that vast centre of British ingenuity and mechanical skill, and intimately acquainted with the feelings that pervade the great body of manufacturers in iron, steel, brass, japan, silver, gold, glass, porcelain, silk, cotton, wool, &c., &c., toward your country. Regarding it, therefore, simply as a place of consumption and demand for their endlessly-diversified productions, their most ardent wishes are breathed forth for your onward progress and unlimited greatness.

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"3. BRITISH STATESMEN.—Our senators,
as a body, are persons of liberal education,
possessing extensive information and expanded
minds; and from their knowledge of our na-
tional resources, of our incalculable mineral
riches, and of the indefatigable industry of our
artisans, they can not fail to entertain the con-
viction of the sound policy of our friendly al-
liance and mercantile intercourse with Amer-
ica. I need only refer to the late most grati-
fying visit to your country of a nobleman, who
is now an active member of the queen's gov-
ernment. Intelligent and benevolent as was
Lord Viscount MORPETH's regard for the
United States before his visit to America, it
has been much increased by the cordial wel-
come he received from your citizens, and by
the discovery of the real greatness of your
Union. And his concern for a closer alliance
between the two countries, is shared by his
colleagues in the government; and, as is
manifest, by every public character in Great
Britain.

"4. BRITISH CHRISTIAN MINISTERS.—
These of every denomination throughout the
British isles, feel the liveliest interest in the
progress of religion in America. They look
upon the grand army of nearly *twenty thou-*
sand of the faithful ministers of Christ, labor-
ing in every part of the extensive Union—a
noble band of whom we delighted to see at our
evangelical alliance—many of them profound-
ly learned, and possessing the rarest talents
and the most exalted virtues—and a goodly
host of them occupied in important missionary
enterprise among the heathen—they reflect
upon them with admiration of the grace of
God our Savior, and cherish gratitude on their
account, for his sovereign gifts and the bless-
ings of his Holy Spirit.—These they look
upon as the hope of America.

"5. BRITISH THEOLOGICALS.—America,
though comparatively a young country, has
reason to glory in the number of her learned
orthodox divines. Many of their volumes are
venerated in Britain. President Edwards,
Davies, Dwight, Alexander, Hodges, Barnes,
Bush, Mason, Robinson, Sprague, Spring,
Stuart, and many others of distinguished em-
inence, are held in deserved honor in England
and Scotland by those of the highest reputa-
tion in the churches of Christ. The fruitfulness
of the United States in the useful labors of
their excellent divines, more than on other
accounts, unites to them the hearts of the best
men in Great Britain, in the sacred bonds of
Christianity.

"6. BRITISH PHILANTHROPISTS.—A gen-
erous band of these are found in Great Britain,
whose 'charity begins at home,' but does not
end there. America has very largely engaged
their warmest sympathies. They see in that

mighty confederation of the states, a vast field
for the exercise of philanthropy; and they
cherish it with the utmost ardor. I need only
mention the sacred breathings of my late valued
friend, Joseph John Gurney, Esq., brother of
my late venerated colleague and fellow-labor-
er, Elizabeth Fry, whose names, and the fruits
of whose philanthropy, are imperishable.—
Every British philanthropist is prepared to
subscribe to the declaration of the amiable
GURNEY, as he published it in America, in
1839, and in England in 1840, on his return
from his visit of three years to the West In-
dies and America: 'I heartily desire to cul-
tivate peace and good will among all mankind;
and though *I am no American citizen, I AD-*
MIRE THE FEDERAL UNION OF THIS GREAT
COUNTRY, AND CORDIALLY DESIRE ITS UN-
BROKEN PERMANENCE, AND CONTINUED AND
INCREASED PROSPERITY.'

"British philanthropists feel interested in all
the reforms, &c., going on in America. They
believe that if British and American Chris-
tians do their duty, the boy is at school who
will live to see half the human family speak-
ing the English language, and half the habita-
ble surface of the globe covered with the
Anglo-Saxon race, and blessed with its civiliza-
tion. The railroad engines that shall thun-
der through the heart of Asia, Africa, and the
American continent, will speak and teach the
English language, and so will the mounted
lightnings on the highways and wire bridges
of thought that shall be erected for the con-
verse of the world's extremes. Let us lay
hold of the hopeful side of all vexed questions,
and follow those things that make for PEACE,
remembering that 'God has made of one blood
all the children of men, to dwell on all the face
of the earth;' let us bury and forget all past
animosities, and, in our respective nations, do
everything in our power to promote the litera-
ry and religious instruction of all classes, with-
out distinction. Let virtue and merit be the
only test of character, and all be invested with
the right of citizenship on equal terms; let
every civil prize, every useful employment,
every honorable station, be thrown open to the
poor as well as the rich. Let us encourage,
and never depress, *the natural desire to*
rise. If this be done, every man would rest
on his own responsibility. Character, like
other things, would find its natural level;
LIGHT AND TRUTH would spread without ob-
struction; and the great North American Union
would afford to an admiring world, a splendid
and unsullied evidence of the truth of that
mighty principle on which the constitution is
founded, 'All men are created EQUAL, and
are endowed by the Creator with certain IN-
ALIENABLE RIGHTS—LIFE, LIBERTY, AND
THE PURSUIT OF HAPPINESS.'

"Sufficient is here testified, on which to found my appeal to the people of America, to enter, with all their hearts, into an indissoluble compact of friendship and alliance with us Britons. God has rendered us worthy of their esteem, attachment, and confidence. Such an alliance, founded in virtue and benevolence, and sanctified by Christianity, will assuredly bless both the contracting parties. From America and Britain it will bless the whole world, and secure the blessing of ALMIGHTY GOD, THE FATHER OF ALL NATIONS.

"COLUMBIA, child of Britain—noblest child!
I praise the glowing lustre of thy worth,
And fain would see thy great heart reconciled
To love the mother of so blest a birth;
For we are one, Columbia! still the same
In lineage, language, laws, and ancient fame,
The natural nobility of earth;
Yes, we are one, the glorious days of yore
When dear old England earned her storied name
Are thine, as well as ours, for evermore;
And thou hast rights in Milton, even as we—
Thou too canst claim 'sweet Shakspeare's wood-
notes wild.'
And chiefest, brother, we are both made free,
Of one religion, pure and undefiled!

"I blame thee not, as other some have blamed—
The high-born heir hath grown to man's estate;
I mock thee not, as some who should be shamed,
Nor ferret out thy faults with envious hate;
Far otherwise, by generous love inflamed,
Patriot, I praise thy country's foreign son,
Rejoicing in the blaze of good and great
That diadems thy head; go on, go on!
Young Hercules, thus travelling in might,
Boy Plato, filling all the west with light,
Thou new Themistocles of enterprise,
Go on and prosper—Acolyte of fate!
And—precious child, dear Ephraim—turn those
eyes—
For thee thy mother's yearning heart doth wait!

"With ardent prayers for the accomplish-
ment of these grand objects, I remain, a Brit-
ish lover of America,

"THOMAS TIMPSON."

LITERATURE OF CHINA.

If there is any one thing which more than another elevates the Chinese character, it is their literary institutions. In letters and education China takes the first rank among heathen nations.

There are few countries in which education is so widely diffused as in China; but it fails to produce its due improvement on the mind from the fact that it is pursued for the purpose of obtaining office, literary eminence being the only path to political distinction. Education is consequently rarely bestowed upon females; and few, if any, of the other sex pursue knowledge for its own sake.

CHINESE NAMES.—A child's first name is given when about a month old. This is called the *milk-name*; and is usually some trifling epithet, as the name of a flower for girls, and of some distinguished virtue for boys. This name is dropped when the child grows up.

The children associate together till they are about eight years old, when the boys are sent to school, and the girls kept secluded in the house. When a boy enters school, he receives another name, called the *book-name*, which is conferred with much ceremony, and which he afterward retains. In the family, however, he is often called familiarly by his *milk-name*.

Persons engaged in business have what is called a *shop-name*, not putting their own proper names on their stores. This shop-name is somewhat analogous to our names for hotels; consisting sometimes of such phrases as "mutual advantage," "abundant profits," &c. A man's last name is given to him after his death, on account of his moral qualities, and is equivalent to the epitaphs on our tombstones.

EDUCATION OF CHILDREN.—Wealthy families prefer to educate their children at home, and sometimes two or three families will unite and engage the services of a teacher. In such case the daughters are sometimes instructed; and perhaps nine tenths of all the educated females in China obtained their learning under such circumstances. "There is not," said Mr. Williams, "as far as I know, a single girls' school in Canton."

At the door of the school is a tablet in honor of Confucius, to which the scholars bow as they enter, and sometimes offer incense. The masters are as severe as in any country. The first task is to learn the characters. The boys learn to form the characters by tracing them with a pencil on paper which is thin enough for the characters to show through. They learn the names of the characters by standing up in a class before the teacher, who reads off the first six characters in the books, and they repeat them after him; six more are then gone over in the same way, and the boys are then sent to their seats to learn them by heart, twelve being considered enough for one lesson. As they always study aloud, they make not a little noise over their tasks. When they have committed the first twelve characters to memory, they recite them to the teacher, who gives them twelve more, and so on, till they have gone through the whole book, which contains two hundred and seventy-six lines, of six characters each. During all this time they are entirely ignorant of the meaning of what they have learned, knowing nothing but the names of the characters. In every school they always begin with the same book; and when this is finished they go through a second

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During all this time they t of the meaning of what knowing nothing but the acters. In every school with the same book; and d they go through a second

book, which contains a thousand characters; after which the teacher gives his pupils some idea of what they have been reading in the first book. In this way they go through their nine classics, the whole of which are learned by heart; but neither history, geography, natural philosophy, religion, nor arithmetic, is taught in the schools.

LITERARY EXAMINATIONS.—These are peculiar to China. They are four in number, and progressive in degree. The *first examination* takes place in the town or village, and all persons are eligible as candidates. Those who pass this trial are said to have "a name in the village."

The *second examination* is held in the district town, before the literary chancellor. All in the district who were successful at the first examination are eligible for the second; and sometimes as many as thirty or forty thousand students are collected on these occasions at Canton. The examination lasts three days, and on each day a theme is given on which the candidates are to write an essay. The successful candidates receive the first literary degree.

The *third examination* is held in the provincial town every third year, and is open to all the students in the province who have received the first degree. Two examiners are sent from Peking, who, with the literary chancellors, form a board of twelve examiners. In the place of examination are several thousand small cells. The competitors give their names, age, lineage, &c., and are carefully searched to see that they have not secreted any copy of the classics about them. They are then furnished with writing materials, and shut up separately in small cells for two days, during which time they are required to compose essays and poems on given subjects. The same subjects are given to all the candidates, and each is expected to use at least two hundred characters in his composition. At Canton there will sometimes be seven thousand candidates at this examination, of whom only seventy-two can be successful, the diplomas being limited to that number.

To read and determine the merits of seven thousand essays on the same subject is a tedious and laborious work; but sometimes the examiners lighten their task by passing over many of the essays without reading. A student who suspected this, once wrote an essay severely criminating the chancellor, knowing that if it were read he should be called to account for it. He heard nothing of it, however, and rightly concluding it had never been read, he published it; and the result was that the officer was discharged. Bribery is often effectual in procuring a favorable award from the examiners: but not to such an extent as

entirely to vitiate the benefits of the examination.

The names of the candidates to whom the degree is awarded are announced at midnight from one of the watch-towers, and placarded next morning over the city. The candidates themselves are honored with a feast in the governor's palace, and afterward receive the congratulations of their friends.

Unsuccessful candidates are allowed to try again at subsequent examinations, as long as they please; and there have been instances of father, son, and grandfather, appearing as competitors at the same time.

The *fourth examination* takes place at Peking; and all who have passed the previous examinations are allowed to compete. The manner of proceeding is similar to that pursued in examining for the second degree. Those who are successful receive the third degree, and are eligible for important offices; but it is said that in the distribution of honors and offices the Manchous are more favored than the Chinese.

The fourth degree is an office of itself. Those who obtain it reside at the court; and by this policy the men of the greatest talents are collected at the capital, where they can be best directed and controlled. The emperor's son passes through these examinations the same as other persons.

EFFECTS OF THIS PLAN.—The benefit of this system of examinations is, that it excites the mass of the people to apply themselves to learning, and keeps up a high standard of literature, as the books they are required to study are the best in the language; and to have any chance of success, they are compelled to make themselves so thoroughly acquainted with their contents that they can never forget them. Those who are not successful in reaching the highest degree have not spent their time in vain, as they generally obtain situations as schoolmasters, government clerks, &c.

Among the evils of the system may be mentioned, that the plan of carrying every student in the empire through the same routine of ancient lore, and bur'ening his memory with it, destroys the power of invention, and begets a blind admiration of antiquity, so that the people of China neither hope nor desire to be any wiser than their fathers; a mental uniformity pervades them; the lapse of centuries brings little or no intellectual advancement, the minds of the whole people continuing to run in a sort of railroad track after Confucius, who though he flourished as far back as the time of Ezra, yet exerts perhaps a greater influence over his fellow-men than any other man we have ever heard of.

THE LITERATURE OF CHINA IS VERY EX-

tensive, though it can not be said to contain much that would repay the study of foreigners. The most celebrated writings are the nine volumes already referred to, and which may be regarded as their sacred books. They are called the *Five Classics* and the *Four Books*, and are chiefly written by Confucius. They contain, among other things, the early history of the empire, and abundance of moral precepts, minute directions for human conduct from childhood and upward. Many of the latter would appear to us childish and trifling, but not so to the Chinese, who are taught to revere and govern themselves by them.

Of historians they have many, and their works are very voluminous. They have only two or three distinguished poets; but are very fond of making poetry, as an amusement. A person at the table will give out a subject, and each of the company will write verses upon it. Their poetry is mostly in heptameter, the character of their language not allowing the variety of metres that we make use of. Sometimes they will adopt a very artificial style, making all the words in a line end in the same sound; the number of characters having the same sound affording great facility for this kind of composition. Novels are very abundant, and some of them very licentious.

CHINESE PROVERBS.—The Chinese are very fond of aphoristic proverbs and sayings. Mr. Williams repeated many of these, from which we select the following as specimens:—

- "Never climb a tree to catch a fish."
- "Win a cat, and lose a cow" (ridiculing the folly of going to law for trifles).
- "Good iron is not used for nails, nor are soldiers made of good men."
- "Ivory does not come from a rat's mouth."
- "An avaricious man is like a serpent wishing to swallow an elephant."
- "Two skins can not be stripped from one cow" (meaning that there is a limit to extortion).
- "To instigate a villain to do wrong is like teaching a monkey to climb trees."
- "The chick will come out of the egg" (equivalent to our "murder will out.")
- "Exaggeration paints a serpent, and adds legs."
- "All that a fish drinks goes out at its gills," (applied to a spendthrift).
- "A blustering fellow is like a paper tiger."
- "Dig a well before you are thirsty."
- "Let every man sweep the snow from his own door, and not busy himself about the frost on his neighbor's tiles."

CHINESE LANGUAGE.—The Chinese is the only modern language in which the characters do not represent sounds. The whole number of characters in their dictionaries is upward of forty thousand; but as many of them are

obsolete, or duplicates, the actual number is not more than thirty thousand. They may be arranged under the following classes:—

Imitative symbols, which bear some resemblance to the things they are designed to represent.

Indicative symbols, in which something in the form of the character indicates its meaning; as a dot under a line signifies "beneath;" a triangle, "unity;" a stroke drawn through a square signifies "the middle," or "to divide."

Combined symbols, the symbols for fire and surround, when united, signify "to roast." An eye with legs under it means "to see." A child in the house signifies "letters," because learning requires long study in a house.

There are also *inverted* and *syllabic* symbols, but their number is not large.

All the characters in the language may be resolved into two hundred and fourteen radicals. The greatest number of strokes in any one character is forty-seven. The number of characters in actual use is not more than ten thousand.

[Mr. Medhurst says that by a careful collation of an historical novel in twenty volumes, and of the Chinese version of the Scriptures, it appears that the whole amount of characters used in both does not much exceed three thousand different sorts.]

There are several dialects in China, but as their written language represents things, and not sounds, it may be perfectly intelligible to persons who could not understand one another's speech. In this respect it resembles our figures, or characters to represent numbers, which are as intelligible to a Frenchman or a Spaniard as to us; yet each in speaking would designate the numbers by words which we could not understand. The Japanese, Manchous, and Chinese, can understand one another when they write, although their spoken languages are very different.

The variety of spoken dialect in China are rather perplexing to travellers, who find it necessary to learn the court dialect, which is understood by some persons in all parts of the country.

Books.—Books in China are very abundant and cheap; but the charge for almanacs, dictionaries, and topographical works, is higher than for other books. They are printed from wooden blocks, on each of which a page of the matter has been cut. These blocks will give three thousand impressions before they are so worn as to require retouching. Their paper is very thin, and printed only on one side. The top, bottom, and back of the volume, are cut, but in front the folds are left uncut, so that the blank sides of the leaves are not seen. The books are merely stitched

icates, the actual number is thirty thousand. They may be divided into the following classes:—
seal characters, which bear some resemblance to the actual things they are designed to represent.

Picture characters, in which something in the character indicates its meaning; a line signifies "beneath;" a stroke drawn through signifies "the middle," or "to divide."

Phonetic characters, the symbols for fire and water, united, signify "to roast;" a line under it means "to see;" a line above signifies "letters," because it requires long study in a house.

Alphabetical symbols, which are not large, and are used in the language may be divided into hundred and fourteen radical characters, the number of strokes in any character is forty-seven. The number of characters in actual use is not more than

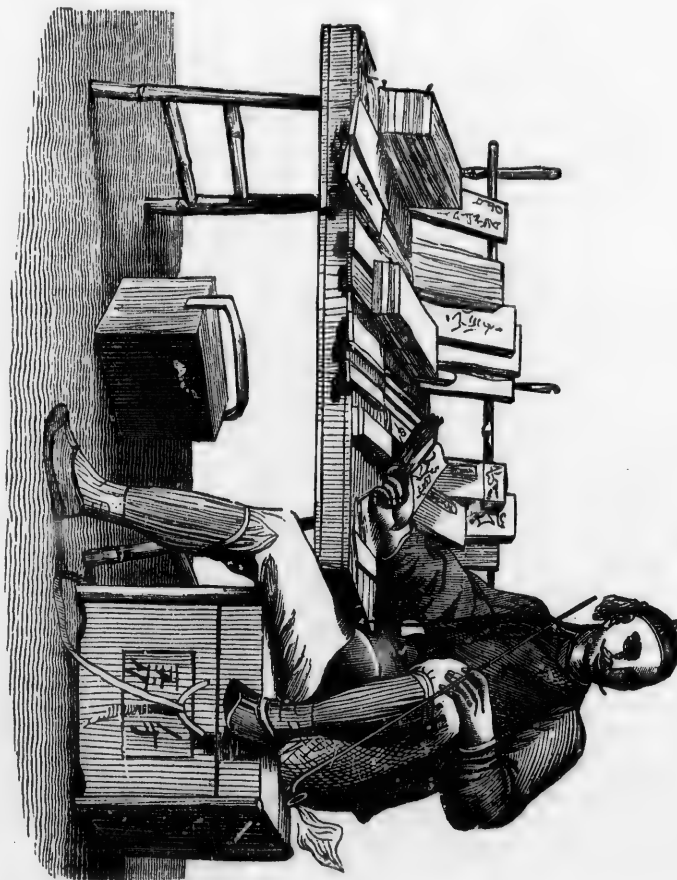
one says that by a careful collation of a novel in twenty volumes, the version of the Scriptures, the whole amount of characters does not much exceed three thousand.

Chinese dialects in China, but as the language represents things, and may be perfectly intelligible to one who does not understand one another in this respect it resembles our characters to represent numbers, which are intelligible to a Frenchman or a Chinese, yet each in speaking would use different words which we understand. The Japanese, Mantchou, can understand one another although their spoken language is different.

The spoken dialect in China are very different to travellers, who find it necessary to learn the court dialect, which is the same in all parts of the

in China are very abundant and the charge for almanacs, dictionaries, and geographical works, is higher than in other countries. They are printed from blocks, each of which a page of type is cut. These blocks will last many impressions before they require retouching. Their type is printed only on one side, and the back of the volume is left blank, the folds of the leaves are merely stitched

Chinese Bookeller.



through, and have no stiff cover, or durable binding, like ours; consequently they do not last long: and very few old books are to be seen.

The Chinese begin their books at what we should call the last page; and the lines go down instead of across the page.

The Chinese do not write with pens, but with sable pencils. Their *escritoire* is made of a piece of polished marble, in the ends of which are holes for the cakes of ink, and for water: the cake of ink is moistened and rubbed against the marble until it becomes liquid and fit for use. The brush, ink, paper, and marble, are designated by a simple word which signifies the *four precious things*.

The Chinese bookseller, as represented in our engraving, has no store, but carries his books about with him.

SAINT PETERSBURG.

No greater or nobler merely human task was ever undertaken, than that with which Peter the Great charged himself, when the death of his brother called him to the throne. It was to civilize the barbarous race over whom he was called to rule. To fit himself for this purpose, he left his kingdom and travelled into western Europe, to observe and study the progress there made. In Holland, especially, did he learn what triumphs the art and genius of man can acquire over nature itself. Wishing for a navy, he there became a practical ship-builder, and returned to his home determined to rear a second Amsterdam among the frozen waters of the northern Baltic. Men of genius and skill were taken freely into his service.

The gulf of Constadt appeared to him, from the size and depth of the Neva at its mouth, suitable to his designs, and he determined to make it a mercantile and naval station. To protect this establishment a fortress was constructed on an island formed by the two arms of the Neva. Then on the left bank of the grand Neva was reared the *Admiralty*, and then the wooden palace. With Amsterdam as the model in his eye, he now determined on the site of his future city, the foundation of which was laid in Wassili-Ostroff, an island formed by the large and smaller Neva. Canals were dug, and wooden houses were erected on it. As the difficulties of the project increased, so did the determination of the czar. More canals were dug and drains made to rid it of the water which stagnated in it, until finally streets having taken the place of the canals, Wassili-Ostroff is now one of the finest quarters of St. Petersburg.

Now did the genius of Peter lead him to lay out a plot of his new city on a scale suitable to the capital of his vast empire. Both banks of the Neva were lined with marshes. To enable them to bear the weight of the superb edifices he contemplated, they must be thoroughly reclaimed and drained. It was an herculean task, worthy of such a monarch. Streets of great width, large and superb squares were traced out, and the northern capital was to be the admiration of Europe. The seat of government located there, the nobility and courtiers naturally flocked thither, and it was easy to predict the brilliant future which awaited the city of the marshes.

Viewed in connexion with the rest of the empire, no capital in Europe is so badly located. It is in a distant and remote corner, situated on a marsh of Ingira, in the sixtieth degree of north latitude. The climate is most severe, the adjacent country desert, sterile and unhealthy—no other man would probably have thought of rearing a capital in such a position. But Peter just then was Dutch-mad. He had the Holland mania on him, and Amsterdam in the midst of its dikes and canals was preferable in his eyes to the splendid locations of many other great European cities. The position of St. Petersburg and the wretched country around it, renders its inhabitants dependent upon remote provinces for a large portion of their provisions. As a maritime position, too, it is most wretched, as the Neva, on which it is located, is frozen steadily during six months of the year, so that vessels coming from it on voyages of any, even moderate distance, are obliged to leave late in the season and return early; they can, moreover, only go out with easterly winds, and those from the west prevail chiefly during the summer; while the soft water of the Neva is very prejudicial to them.

Add to this the dreadful ravages which are constantly made by the breaking up of the ice in the Neva, and the numerous destructive fires, resulting from the immense number of wooden buildings, used in preference in consequence of the severity of the climate, and we have a catalogue of drawbacks against the location of this memorable city. Peter wished, however, to force a people, who are not by nature maritime, to become so. In this respect, like all other attempts to force things out of their natural channel, and in opposition to those immutable laws which Providence has wisely ordained for the government of the human race, he failed.

In his determination to un-Russianize the Russians, Peter acted wisely in removing his capital from Moscow. So long as that great and "holy city" remained the capital of the empire, he must have found insurmountable

genius of Peter lead him to lay a new city on a scale suitable to his vast empire. Both banks were lined with marshes. To bear the weight of the superb emplacements, they must be thorough and drained. It was an unworthy of such a monarch. width, large and superb squares and the northern capital was the seat of Europe. The seat of power there, the nobility and the army flocked thither, and it was the brilliant future which awaited the marshes.

in connexion with the rest of the world in Europe is so badly located, a distant and remote corner, far from the sea, in the sixtieth latitude. The climate is most unhealthy, the country desert, sterile and barren. A German would probably have chosen a capital in such a position. Peter was Dutch-mad. He had a great idea on him, and Amsterdam in the Netherlands was preferred to the splendid locations of the European cities. The city of St. Petersburg and the wretched marshes, renders its inhabitants devoted provinces for a large portion of the year. As a maritime position, it is wretched, as the Neva, on which it is situated, is frozen steadily during the year, so that vessels cannot pass, and even moderate winds are unable to leave late in the season; they can, moreover, only be driven by the winds, and those from the north, chiefly during the summer; the ice of the Neva is very prej-

udicrous ravages which are caused by the breaking up of the ice, and the numerous destructive winds from the immense number of islands used in preference in consequence of the climate, and the use of drawbacks against the wretched city. Peter wished to have a people, who are not by any means to become so. In this respect, his attempts to force things upon the channel, and in opposition to the laws which Providence has made for the government of the city, are led.

attempts to un-Russianize the city, and to remove his capital. So long as that great city remained the capital of the empire, he found insurmountable

obstacles in removing the prejudices of his people. It is much easier to change the character of men by removing them to other places, than to effect it in the spot in which all their early prejudices have been born and grown. His first attempt was of course on the higher classes, and through them gradually on their dependants. In this view of the case some removal was as wise as necessary in this case. But should St. Petersburg have been the spot?

Its distance from the centre of the empire and its vicinity to the frontier, answer no. Had the seat of government been more in the heart of the empire, so that the government could have been earlier apprized of his movements, the rebel Pougatcheff, the false Peter III., would not, at the head of his insurgent peasantry, have been enabled for a time to sweep all opposition before him, and cause Catherine II. to tremble for life and throne. Its vicinity to the frontier rendered it in 1790, almost a prey to the Swedes, who disembarked within five miles of the city. There is nothing to prevent a superior naval power from at any time giving great disquietude to the city.

We have spoken of the inundations of the Neva. We will briefly glance at several of the most striking. Mention is made of them from the earliest times. On the 5th of November, 1715, the whole city was under water. On the same day in 1721, an inundation which filled the lower part of the city to the depth of seven feet four inches occurred. In the upper parts of the city the water was up to the breasts of the horses. The czar, who was at a ball at the English ambassador's, regained his palace with great difficulty. Inundations also occurred twice in 1726, in 1729, 1732, 1736, 1744, 1752 (in which year the waters rose to over eight feet in the lower part of the city, and remained so for eight days), in 1757, 1762, and 1777. This last was the most formidable of the eighteenth century. It occurred on the 16th of September, during the night, and by six o'clock in the morning had raised the waters in the streets to a depth of over ten feet. They passed all through the city in boats, large vessels were driven up in the streets, and one of considerable size rested on the steps of the winter palace—a very large number of lives were lost, and much property destroyed.

We pass by several others of minor importance, more or less destructive, however, to note the great one which occurred on the 7th of November, 1824. The waters of the Neva had been swollen by copious rains, and on that day overflowed their banks. The capital was soon under water to the depth of many feet, which, agitated by the fury of the wind, resembled in the streets of the city the waves of the ocean. Vessels were driven through

the streets; and so sudden was the inundation, that very many were surprised by it in the streets, who, unable to escape by climbing to the nearest resting-places, were drowned. Four hundred and eighty persons were officially announced to have perished, which was, however, believed to be short of the mark. Four hundred and sixty-two houses were entirely destroyed, three thousand six hundred and eighty damaged. Three thousand six hundred head of cattle were drowned; and at the customhouse property to the value of several millions of roubles was totally lost. Since then there have been several inundations, but none so destructive. The most and worst of these occurred from the violence of the west wind, in meeting the waters of the river swollen with heavy rains, and forcing them back toward their source. To this casualty, against which no human power can guard, St. Petersburg is always liable.

The climate of this city in winter is what its latitude indicates. Its coldness and humidity require the utmost care to guard against its influences. The thermometer indicates a range so low as to be almost incredible that civilized man should have voluntarily selected it for a residence. The rich, whose houses are warmed constantly to a summer heat, and who never expose themselves, if they can avoid it, unless entirely muffled in furs, do not suffer from it, as do the poor. The nights are frightful. The *boutechouks* (inferior police agents) and sentries are sometimes found frozen to death. The exposure of the least part of the body is dangerous. Individuals are constantly seen gravely rubbing each other's frozen nose or cheek with snow, to prevent it from becoming gangrened. Thus without, all is ice, cold; within, the stifling heat of the stove. No air can be inhaled in outdoor exercises during that greater portion of the year in which St. Petersburg is buried several feet deep in snow and ice. The principal topic of conversation is the weather, and thermometers are studied with an assiduity which renders a sojourner in St. Petersburg an adept in them.

One of the most curious spectacles afforded by St. Petersburg at this season, is the market for frozen provisions. Housekeepers lay in their stock for the season. All that is bought is frozen, and it is to be kept in the same state. It is curious to see around you numerous dead bodies, having the appearance of petrified animals. Oxen, sheep, lambs, calves, pork, game, all are reduced to the stiffness of marble, and when a piece is to be cut off, it is done by the hatchet. The supply taken home is buried in the snow, and thawed when required for use.

The greatest curse which can befall St.

Petersburg during this season, is a thaw. By it provisions are destroyed, and the capital dependent on distant provinces for a supply* is threatened with a famine. The roads, too, become such as to forbid any hope of immediate assistance. The effect of this rise of temperature, by melting the upper crust of the snow, is to render the streets almost impassable, and when the final and general thaw takes place in the spring, you are reminded in wading through them of the original marshes out of which they sprang.

The aspect of St. Petersburg is grand and imposing. It may be called, however, like a large portion of its inhabitants, always in uniform, always under arms. Its regularity, its immense palaces, its immeasurable squares, its streets laid out by a line, its masses of stone and granite, always fill the mind with surprise and admiration. It wants, however, that variety which is the great charm of some of the older European cities. The immense scale on which everything is laid out, deprives it of that life, which is the charm of many other capitals. In the quarters of the city and the streets, which are remote from the haunts of promenaders and of business, a dulness which may be felt reigns. In this respect it resembles, but on a large scale, many portions of our sister-city, New York. It has been likened by a likely French writer to Versailles, on a large scale, but Versailles as it now is, empty, pompously insignificant, and majestically insipid; not Versailles as it existed in the times of Louis XIV., with its thousands of courtiers and populace of lackeys.

The Grecian style of art, with its long façade, its lofty columns, its noble porticoes, does not appear to us suitable to the climate of Russia, and yet it is this which the inhabitants of St. Petersburg have sought to acclimatize in their cold and wintry regions. It seems strikingly out of place to see the Parthenon, which overlooked the sunny waters of the south, transferred to the ice-bound shores of the Baltic. The temples which graced the rocky steepes of the Egean seem out of keeping on the marshes of the Neva. And yet it is to this style of architecture that they have so much resorted. These are, however, rendered worse by being adorned with ornaments of tinsel show, whose very beauty in their native climes is their chaste simplicity.

By the side of all this magnificence is found the ever-present Russian filth. These two words, says a traveller, describe the city. The hotels especially, abound in this. They are most uncomfortable within, and form a

* There are frequently seen on the same table, the sturgeon of the Volga, the veal of Archangel, the mutton of Astrachan, the beef of the Ukraine, and the pheasant of Hungary and Bohemia.

striking contrast to the splendor that reigns around. Nor is the attendance better. There is a perfect contempt of comfort, on the part of those charged to administer it to you. "I resided in a hotel," says M. Marmier, "which had been recommended to me as one of the best. Every seven or eight days, my moujik, tired of yawning on the staircase, and not knowing what else to do, came to take the covering off my bed and pour a little fresh water into a jug when he went away, enchanted at having accomplished such marvels. Cleaning a bureau or dusting a chair was work unworthy of him. He quietly permitted floods of dust to accumulate on the furniture."

Such is a brief glance at St. Petersburg. To have considered it more at length would have led us into details inconsistent with our plan.

SELF-GOVERNMENT.

In the midst of events which seem to bespeak predestination, man still feels that he is free. The planets wheel through the heavens: the earth revolves on its axis, and performs its vast annual circuit; the seasons come and go; the clouds rise and vanish; the rain, the hail, and the snow, descend; and in all this, man has no voice. There is a system of government above beyond, and around him, declaring a sovereignty which takes no counsel of him. But still, in the midst of all this, man possesses a consciousness of freedom. The metaphysician may be confounded with the seeming inconsistency of an omnipotence, ruling over all things, yet granting free agency to the subjects of its power. But common sense does not puzzle itself with an attempt to discover the precise point at which these seeming principles of opposition may clash or coalesce. It contents itself with the obvious fact that God is a sovereign, who has yet created beings, and given them their freedom, prescribing boundaries to their powers and capacities, indeed, but within these limits permitting them to act by their own volition.

Man then is free; he has the power to seek happiness in his own way. He enters upon existence, and sets forward in the path of life. But as he passes along, a thousand tempters beset him. Pleasure comes to beckon him away, offering him present flowers, and unfolding beautiful prospects in the distance. Wealth seeks to make him her votary, by disclosing her magic power over men and things. Ambition wooes him with dreams of glory. Indolence assays to soften and seduce him to her influence. Love, envy, malice, revenge, jealousy.

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ousy, and other busy spirits, assail him with their various arts. And man is free to yield to those temptations if he will; or he has the power to resist them if he will. God has sur- rendered him to his own discretion, making him responsible, however, for the use and the abuse of the liberty bestowed upon him.

If a person mounts a high-spirited horse, it is important that he should be able to control him, otherwise he may be dashed to pieces. If an engineer undertakes to conduct a loco- motive, it is necessary that he should be able to guide or check the panting engine at his pleasure, else his own life, and the lives of others may be sacrificed. But it is still more indispensable that an individual, who is in- trusted with the care of himself, should be able to govern himself.

This might seem a very easy task; but it is one of the most difficult that we are called upon to perform. History shows us that some of the greatest men have failed in it. Alex- ander could conquer the legions of Persia, but he could not conquer his passions. Cæsar tri- umphed in a hundred battles, but he fell a victim to the desire of being a king. Bona- parte vanquished nearly the whole of Europe, but he could not vanquish his own ambition. And in humbler life, nearer home in our own every-day affairs, most of us are often drawn aside from the path of duty and discretion, because we can not resist some temptations or overcome some prejudice.

If we consider that self-government requires two things: first, whenever we are tempted to deviate from the path of rectitude or to act imprudently, or whenever we are tempted to neglect any duty, that we should possess and exercise the power to check ourselves in the one case, and to compel ourselves to the re- quired action in the other, we shall see that it is the great regulator of conduct, the very balance-wheel of life. Without it, a person is almost sure to miss happiness, however great may be his gifts, however high his for- tune; with it the humblest individual may command not merely the world's wealth, but the world's respect; and, what is better, peace of mind, and the consciousness of Heav- en's approbation.

If parents would not trust a child upon the back of a wild horse without bit or bridle, let them not permit him to go forth into the world unskilled in self-government. If a child is passionate, teach him, by gentle and patient means to curb his temper. If he is greedy, cultivate liberality in him. If he is selfish, promote generosity. If he is sulky, charm him out of it, by encouraging frank good hu- mor. If he is indolent, accustom him to exer- tion, and train him so as to perform even on- erous duties with alacrity. If pride comes in

to make his obedience reluctant, subdue him, by either counsel or discipline. In short, give your children the habit of overcoming their besetting sins. Let them feel that they can overcome temptation. Let them acquire from experience, that confidence in themselves which gives security to the practised horse- man, even on the back of a high-strung steed, and they will triumph over the difficulties and dangers which beset them in the path of life.

TRAJAN AND ROBERT FULTON.

THE CONNEXION OF THEIR WORKS.

THE close of the first century beheld a Spaniard on the throne of Rome. He was a native of Seville, and was at the head of the army in Germany when the aged Nerva called him to share the cares of the government. The death of the old emperor soon after oc- curred, and Trajan was left to reign alone. When the eyes of millions were turned tow- ard him with the most profound interest, he proved himself to be adequate to his place, and for nearly twenty years continued to fill the Roman world with the renown of his achievements. His immediate predecessors had professed to maintain the peaceful policy of Augustus, but their vices rendered them quite incompetent to carry it out with dignity and success. The concessions which Augus- tus had won by diplomacy, they could not keep, either by wisdom or by force. Although they were troubled by incursions on their eastern borders, yet the Roman name was most grossly insulted by the barbarians of Dacia, north of the Danube, who crossed the river, ravaged the country, defeated the le- gions, and even imposed a tribute on Domitian. At last the humbled army were surprised to see an imperial soldier at their head, march- ing on foot, sharing their fatigues, and content with their fare. Under the eye of Trajan, the ancient discipline and valor were revived; and the Dacian king, Decebalus, ranked among the first warriors of his age, was thrice de- feated; his hordes were driven back beyond the Danube, and his kingdom was reduced to a province of the empire.

The victories of Trajan, however, would hardly be thought of now, but for the stony records which proclaim to the traveller along the confines of Dacia, the bold projects of the emperor to spread the civilizing arts into those northern regions, and to naturalize those sav- age tribes to the Roman life and manners. Indeed, a fresh reminiscence of his history was brought to light, ten years since, by a Servian fisherman, who discovered, in the bed

of the river, near the village of Praona, a bronze bust of Trajan. About twenty-five miles above this spot, are yet to be seen the remains of that splendid bridge of stone, which Trajan reared across the Danube, at a point where the river is two thousand and four hundred feet in width, guarded it with strong castles at both ends, and 'tuted it to be a permanent thoroughfare to connect the new conquest with the old dominion. Little did he think that it would ever fall by the hands of Romans! Least of all could he imagine that his successor, acknowledging his incapacity to govern so wide a realm, would destroy this noble monument of imperial power. To-day, the bases of the castles are visible, and buttresses eighteen feet thick. Eleven piles may be seen in the bed of the river, at low water. Apollodorus, of Damascus, the great architect of the time, whose name is associated with much of the magnificence of Rome, planned and executed this structure, animated, no doubt, by the full belief, that he was "building for posterity."

Not a long time after the completion of the bridge, the northern traveller of the second century enjoyed the advantage of a well-constructed road, extending from the Danube into the interior of the savage Dacia, terminating near Bender, about fifty miles from the Black sea. It was a bold conception of the emperor, and its traces indicate his faith in the principle, that whatsoever is worth doing at all is worth doing well; for great difficulties were overcome, and in some places it is cut, with signal skill, through solid rock. Seventeen hundred years ago, a man might pass with some degree of comfort through that land; but in these days, if one venture to travel there, as he finds himself seated in a carriage of the rudest form, and jolted over a rough and rutty Moldavian wagon-track, dragged, too, by ponies destitute of all tackle, except a few frail cords, with many a sigh will he call to mind the signs of civilization in the days of Trajan.

But special praise is due to the emperor for his efforts to improve the navigation of the Danube, and to make it subserve, through all time, the interests of commerce. As the geographer looks upon the map of Europe, and beholds this magnificent river, springing up in the very heart of the continent, fed by sixty streams which flow down from the Carpathian and Alpine heights, bringing its constant tribute to the feet of many ancient and mighty cities,—now boldly pushing its way through mountain ramparts, and making forests echo its roar of waters, and now again spreading itself out into a lake of beauty, reflecting scenes of the richest fertility upon its glassy bosom, then rolling on with turbid and rapid volume, till,

at last, it blends with the waves of the Euxine, to wash the coast Asia—how can he avoid being filled with admiration at the sight of such a splendid avenue of commerce, and acknowledging the design of Providence to make it the means of bringing "kindreds and tribes" of men together, in a friendly interchange of benefits, and uniting them in bonds of social intercourse? Ages have rolled away, however, during which the scholar, the merchant, the voyager, and the philanthropist, have read, in the records of geography, that "the Danube is not navigable to the Euxine, on account of the cataracts." Too true, indeed, but what a melancholy testimony is this to the leaden slowness of Europe, in the career of improvement, and to the long, long retrocession of art, science, and civilization in the old world! For, in the reign of Trajan, there was a spirit of enterprise, awakened and fostered by his genius, which could mock at such obstacles to its course, as these "cataracts," that sank to littleness before the march of Roman art. This section of the Eisen Thor, or Iron Gate, on account of the bold sweep of the lofty banks, and the enormous rocks of a ferruginous color which make the river's bed, causing the passage to appear as if entirely choked up, extending not more than seven thousand feet, was not surrounded, at the time of Trajan, by a large canal, beautifully chiselled out according to his directions, designed by him as a lasting boon to northern Europe. But alas! he left no heir to his comprehensive views, and his lofty spirit. His plans were abandoned, and this great work was left to dilapidation and ruin; to be almost choked up by falling stones and earth; to remain for centuries a monument of the solemn truth, that the old Roman civilization had then spent its last energies, and that humanity must pause in its career of progress, to wait for some new impulse, ere it could advance another step, or gain new triumphs over the gloomy reign of barbarism.

"Be patient—bide thy name." This is God's lesson, taught by history to every honest worker in the cause of man. It is taught here—"The night is far spent." The impulse long waited for, has come at last. It has come, not from the bosom of paganism, but of Christianity—not from the shores of the Tiber, but of the Hudson. The mind which grappled successfully with the problem of applying the expansive power of steam to navigation, set at work a moral force which has lately reached the borders of Dacia—has broken the deep sleep of ages—has given to the people new ideas—has kindled a desire for knowledge—has opened new plans for enterprise—has called art from its tomb to renew its youth—and, having disinterred the ship-canal of Trajan

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The different effects which have flowed from the lives of Trajan and Fulton, exhibit, in a striking light, how much can be done by science, and how little by war, for the civilization of mankind. In spite of all the emperor's achievements in Dacia, and his colony of thirty thousand Romans settled there, seventeen

"Like kindred drops, be mingled into one."

THE Niger is a large river of central Africa, celebrated for the uncertainty and mystery which prevailed for ages respecting its course and termination, a problem which has been but recently solved. Its source is in western Africa, near that of the river Senegal. In the upper part of its course it is called by the natives the Joliba, and in the lower part it is known by the name of the Quorra. The name of the Niger was given to it by Europeans, from the supposition that it was the same river mentioned by Herodotus, Ptolemy,

and others. It is, doubtful, however, whether its existence was known to the ancient geographers. To the moderns it has been known but very imperfectly. By many it was believed to be a branch of the Nile, by others to lose itself either in a lake, or in the sands of the deserts of Africa. Thus its source, as well as its course, remained in obscurity until the latter part of the 18th century, when an association was formed in Great Britain for the purpose of promoting discovery in Africa. In 1788, this society despatched John Ledyard, an American by birth, who had been round the world with Captain Cook, and was a remarkably enterprising traveller. His instructions were to penetrate the interior from Egypt, in search of the Niger. He, however, unfortunately perished in Cairo, in Egypt, the same year. Other fruitless attempts were made by English travellers, proving fatal to themselves, and the course of this river remained in obscurity, no modern traveller having succeeded in reaching its banks. The honor of accomplishing this hazardous enterprise was reserved for the celebrated Mungo Park, a Scotchman, sent out by the association above referred to, in 1795. Landing on the western coast, he penetrated up the river Gambia, which he left, at Medina. Having crossed the Senegal, he arrived soon after, at Jarra, and taking a course southward of east, after great hardships, he at length arrived at the long-sought-for Niger, which he beheld flowing from west to east. From Sego, he continued his journey to Silla, along the banks of the Niger, where, finding himself exhausted and destitute, he determined on returning to England, where he arrived in December, 1797.

Park was sent out again, in 1805, by the African association, to pursue his investigations respecting this river, but this second journey terminated fatally. He proceeded with a party to the banks of the Niger, a few miles below Sego, where he accomplished the building of a vessel and embarked with four Europeans, the only survivors of his party, intending to descend the river to its mouth. From accounts afterward received, it appeared that they were attacked by the natives at Boussa, and killed; the boat was lost and Mr. Park drowned in the river. Various expeditions since sent to Africa, to explore this river, have proved unsuccessful and fatal to the adventurers, until 1830, when two young men, Richard Lander and his brother John, were sent out by the British government (Richard Lander having formerly accompanied Captain Clapperton on a similar expedition). They landed at Badagry, on the west coast of Africa, and proceeded over land to Boussa, on the Niger, whence they ascended to Yaoorie. They then descended the river, and finally

reached the sea by a mouth of the Niger, which had been before known as the river Nun, thus having had the honor of deciding a question which had perplexed geographers for ages. The course of the Niger is nearly northeast from its sources to Timbuctoo, soon after which it is believed to turn to the southeast, until it reaches Yaoorie; thence its course varies from southeast to southwest, flowing into the bight of Benin (a part of the gulf of Guinea). It is supposed to have several mouths, although but one is known. Its course has been traced for two thousand miles, a considerable part of which is navigable for steamboats, through a rich and populous country, and its whole length is probably three thousand miles. Cape Formosa, at the mouth of the Nun, is in latitude 4° 20' north, longitude 6° east.

Our engraving exhibits a pleasing view on the river described above. In that quarter of the world there are few roads, and therefore it is very difficult and dangerous, and sometimes almost impossible, to travel any distance by land. But by means of the great rivers of Africa, which have been well called its high roads, the task of reaching central regions has become comparatively easy. Another river, called the Chadda, which falls into the Niger, enables the voyager to proceed many hundreds of miles toward the east. The people who live in the neighborhood of these rivers are very ready to trade with one another, and with foreigners, as will be perceived by the market-boats in the engraving; but the trade chiefly carried on of late years has been the horrible traffic in human beings. They have sold their own brethren into slavery; and there is every reason to believe that, at the present time, according to the most moderate calculation, Africa loses about one thousand of her inhabitants every day, in consequence of the slave-trade. To check, and eventually to extinguish, this enormous evil, is one of the most important duties of the Christian missionary. Our armed prevention fleets, may check the traffic, but it is the inculcation of Christianity alone, that will insure its abolition.

AMERICAN SCENERY.

THE essay, which is here offered, is a mere sketch of an almost illimitable subject—American scenery; and in selecting the theme the writer placed more confidence in its overflowing richness, than in his own capacity for treating it in a manner worthy of its vastness and importance.

It is a subject that to every American ought

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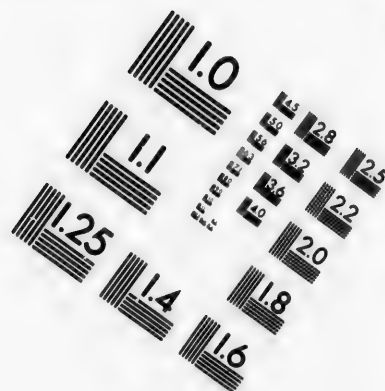
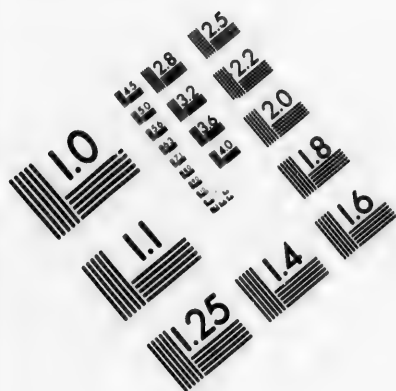
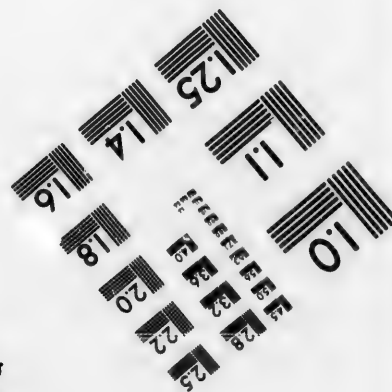
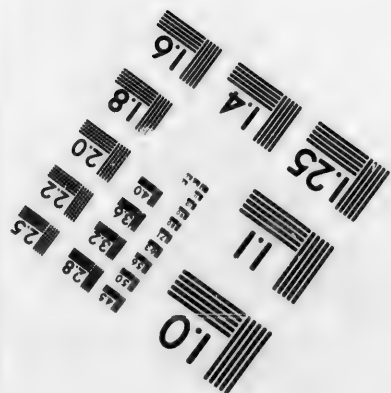
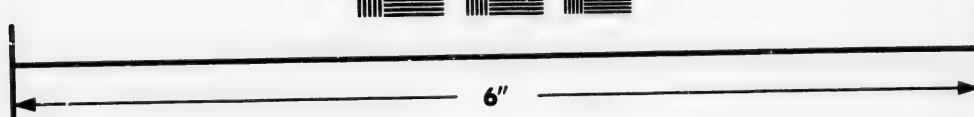
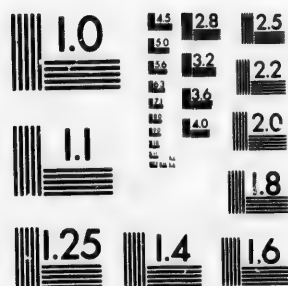


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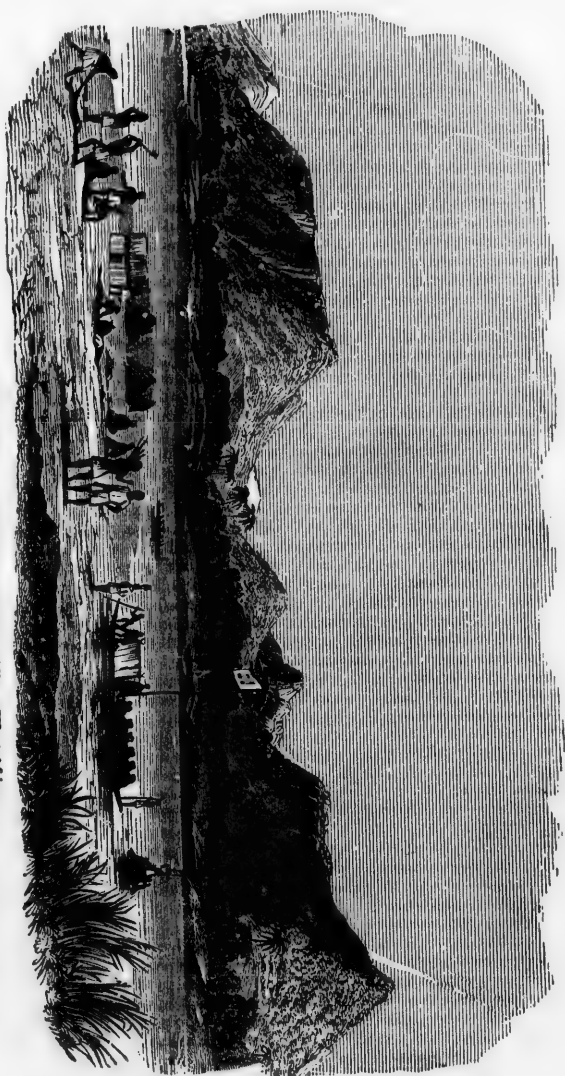
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Mountains and Market-Place, near Bokweh on the Niger, West Africa.

to be of surpassing interest; for, whether he beholds the Hudson mingling waters with the Atlantic—explores the central wilds of this vast continent, or stands on the margin of the distant Oregon, he is still in the midst of American scenery—it is his own land; its beauty, its magnificence, its sublimity—all are his; and how undeserving of such a birthright, if he can turn toward it an unobserving eye, an unaffected heart!

Before entering into the proposed subject, in which we shall treat more particularly of the scenery of the northern and eastern states, we shall be excused for saying a few words on the advantages of cultivating a taste for scenery, and for exclaiming against the apathy with which the beauties of external nature are regarded by the great mass, even of our refined community.

It is generally admitted that the liberal arts tend to soften our manners; but they do more—they carry with them the power to mend our hearts.

Poetry and painting sublime and purify thought, by grasping the past, the present, and the future—they give the mind a foretaste of its immortality, and thus prepare it for performing an exalted part amid the realities of life. And *rural nature* is full of the same quickening spirit—it is, in fact, the exhaustless mine from which the poet and the painter have brought such wondrous treasures—an unfeeling fountain of intellectual enjoyment, where all may drink, and be awakened to a deeper feeling of the works of genius, and a keener perception of the beauty of our existence. For those whose days are all consumed in the low pursuits of avarice, or the gaudy frivolities of fashion, unobservant of nature's loveliness, are unconscious of the harmony of creation:—

"Heaven's roof to them
Is but a painted ceiling hung with lamps;
No more—that lights them to their purposes—
They wander 'loose about; they nothing see,
Themselves except, and creatures like themselves,
Short-lived, short-sighted."

What to them is the page of the poet where he describes or personifies the skies, the mountains, or the streams, if those objects themselves have never awakened observation or excited pleasure? What to them is the wild *Salvator Rosa*, or the aerial *Claude Lorrain*?

There is in the human mind an almost inseparable connexion between the beautiful and the good, so that if we contemplate the one the other seems present; and an excellent author has said, "it is difficult to look at any objects with pleasure—unless where it arises from brutal and tumultuous emotions—without feeling that disposition of mind which tends toward kindness and benevolence; and surely,

whatever creates such a disposition, by increasing our pleasures and enjoyments, can not be too much cultivated."

It would seem unnecessary to those who can see and feel, for me to expatiate on the loveliness of verdant fields, the sublimity of lofty mountains, or the varied magnificence of the sky; but that the number of those who *seek* enjoyment in such sources is comparatively small. From the indifference with which the multitude regard the beauties of nature, it might be inferred that she had been unnecessarily lavish in adorning this world for beings who take no pleasure in its adornment. Who in grovelling pursuits forget their glorious heritage. Why was the earth made so beautiful, or the sun so clad in glory at his rising and setting, when *all* might be unrobbed of beauty without affecting the insensate multitude, so they can be "lighted to their purposes"?

It has not been in vain—the good, the enlightened of all ages and nations, have found pleasure and consolation in the beauty of the rural earth. Prophets of old retired into the solitudes of nature to wait the inspiration of Heaven. It was on Mount Horeb that *Elijah* witnessed the mighty wind, the earthquake, and the fire; and heard the "still small voice"—that voice is *yet* heard among the mountains! *St. John* preached in the desert—the wilderness is *yet* a fitting place to speak of God. The solitary *Anchorites* of Syria and Egypt, though ignorant that the busy world is man's noblest sphere of usefulness, well knew how congenial to religious musings are the pathless solitudes.

He who looks on nature with a "true eye," can not move from his dwelling without the salutation of beauty; even in the city the deep blue sky and the drifting clouds appeal to him. And if to escape its turmoil—if only to obtain a free horizon, land and water in the play of light and shadow yields delight—let him be transported to those favored regions, where the features of the earth are more varied, or yet add the sunset, that wreath of glory daily bound around the world, and he, indeed, drinks from pleasure's purest cup. The delight such a man experiences is not merely sensual, or selfish, that passes with the occasion leaving no trace behind; but in gazing on the pure creations of the Almighty, he feels a calm religious tone steal through his mind, and when he has turned to mingle with his fellow-men, the chords which have been struck in that sweet communion cease not to vibrate.

In what has been said we have alluded to wild and uncultivated scenery; but the cultivated must not be forgotten, for it is still more important to man in his social capacity

—necessarily bringing him in contact with the cultured; it encompasses our homes, and, though devoid of the stern sublimity of the wild, its quieter spirit steals tenderly into our bosoms mingled with a thousand domestic affections and heart-touching associations—human hands have wrought, and human deeds hallowed all around.

And it is here that taste, which is the perception of the beautiful, and the knowledge of the principles on which nature works, can be applied, and our dwelling-places made fitting for refined and intellectual beings.

If, then, it is indeed true that the contemplation of scenery can be so abundant a source of delight and improvement, a taste for it is certainly worthy of particular cultivation; for the capacity for enjoyment increases with the knowledge of the true means of obtaining it.

In this age, when a meager utilitarianism seems ready to absorb every feeling and sentiment, and what is sometimes called improvement in its march makes us fear that the bright and tender flowers of the imagination shall all be crushed beneath its iron tramp, it would be well to cultivate the oasis that yet remains to us, and thus preserve the germs of a future and a purer system. And now, when the sway of fashion is extending widely over society—poisoning the healthful streams of true refinement, and turning men from the love of simplicity and beauty, to a senseless idolatry of their own follies—to lead them gently into the pleasant paths of taste would be an object worthy of the highest efforts of genius and benevolence. The spirit of our society is to contrive but not to enjoy—toiling to produce more toil—accumulating in order to aggrandize. The pleasures of the imagination, among which the love of scenery holds a conspicuous place, will alone temper the harshness of such a state; and, like the atmosphere that softens the most rugged forms of the landscape, cast a veil of tender beauty over the asperities of life.

Did our limits permit we would endeavor more fully to show how necessary to the complete appreciation of the fine arts is the study of scenery, and how conducive to our happiness and well-being is that study and those arts; but we must now proceed to the proposed subject of this essay—American Scenery!

There are those who through ignorance or prejudice strive to maintain that American scenery possesses little that is interesting or truly beautiful—that it is rude without picturesqueness, and monotonous without sublimity—that being destitute of those vestiges of antiquity, whose associations so strongly affect the mind, it may not be compared with European scenery. But from whom do these opin-

ions come? From those who have read of European scenery, of Grecian mountains, of Italian skies, and never troubled themselves to look at their own; and from those travelled ones whose eyes were never opened to the beauties of nature until they beheld foreign lands, and when those lands faded from the sight were again closed and for ever; disdain- ing to destroy their trans-atlantic impressions by the observation of the less fashionable and unfamed American scenery. Let such persons shut themselves up in their narrow shell of prejudice—we hope they are few—and the community increasing in intelligence, will know better how to appreciate the treasures of their own country.

We are by no means desirous of lessening in any one's estimation the glorious scenes of the old world—that ground which has been the great theatre of human events—those mountains, woods, and streams, made sacred in our minds by heroic deeds and immortal song—over which time and genius have suspended an imperishable halo. No! But we would have it remembered that nature has shed over this land beauty and magnificence, and although the character of its scenery may differ from the old world's, yet inferiority must not therefore be inferred; for though American scenery is destitute of many of those circumstances that give value to the European, still it has features, and glorious ones, unknown to Europe.

A very few generations have passed away since this vast tract of the American continent, now the United States, rested in the shadow of primeval forests, whose gloom was peopled by savage beasts, and scarcely less savage men; or lay in those wide grassy plains called prairies—

"The gardens of the deserts, these
The unshorn fields, boundless and beautiful."

And, although an enlightened and increasing people have broken in upon the solitude, and with activity and power wrought changes that seem magical, yet the most distinctive, and perhaps the most impressive characteristic of American scenery, is its wildness.

It is the most distinctive, because in civilized Europe the primitive features of scenery have long since been destroyed or modified—the extensive forests that once overshadowed a great part of it have been felled—rugged mountains have been smoothed, and impetuous rivers turned from their courses to accommodate the tastes and necessities of a dense population—the once tangled wood is now a grassy lawn; the turbulent brook a navigable stream—crags that could not be removed have been crowned with towers, and the rudest valleys tamed by the plough.

And to this cultivated state our western

world is fast approaching; but nature is still predominant, and there are those who regret that with the improvements of cultivation the sublimity of the wilderness should pass away: for those scenes of solitude from which the hand of nature has never been lifted, affect the mind with a more deep-toned emotion than aught which the hand of man has touched. Amid them the consequent associations are of God the creator—they are his undefiled works, and the mind is cast into the contemplation of eternal things.

As mountains are the most conspicuous objects in landscape, they will take the precedence in what we may say on the elements of American scenery.

It is true that in the eastern part of this continent there are no mountains that vie in altitude with the snow-crowned Alps—that the Alleghenies and the Catskills are in no point higher than five thousand feet; but this is no inconsiderable height; Snowdon in Wales, and Ben-Nevis in Scotland, are not more lofty; and in New Hampshire, which has been called the Switzerland of the United States, the White mountains almost pierce the region of perpetual snow. The Alleghenies are in general heavy in form; but the Catskills, although not broken into abrupt angles like the most picturesque mountains of Italy, have varied, undulating, and exceedingly beautiful outlines—they heave from the valley of the Hudson like the subsiding billows of the ocean after a storm.

American mountains are generally clothed to the summit by dense forests, while those of Europe are mostly bare, or merely tinted by grass or heath. It may be that the mountains of Europe are on this account more picturesque in form, and there is a grandeur in their nakedness; but in the gorgeous garb of the American mountains there is more than an equivalent; and when the woods "have put their glory on," as an American poet has beautifully said, the purple heath and yellow furze of Europe's mountains are in comparison but as the faint secondary rainbow to the primal one.

But in the mountains of New Hampshire there is a union of the picturesque, the sublime, and the magnificent; there the bare peaks of granite, broken and desolate, cradle the clouds; while the valleys and broad bases of the mountains rest under the shadow of noble and varied forests; and the traveller who passes the Sandwich range on his way to the White mountains, of which it is a spur, can not but acknowledge, that although in some regions of the globe Nature has wrought on a more stupendous scale, yet she has nowhere so completely married together grandeur and loveliness: there he sees the sublime melting

into the beautiful, the savage tempered by the magnificent.

We will now speak of another component of scenery, without which every landscape is defective—it is water. Like the eye in the human countenance, it is a most expressive feature: in the unrippled lake, which mirrors all surrounding objects, we have the expression of tranquillity and peace—in the rapid stream, the headlong cataract, that of turbulence and impetuosity.

In this great element of scenery, what land is so rich? We would not speak of the great lakes, which are in fact inland seas—possessing some of the attributes of the ocean, though destitute of its sublimity; but of those smaller lakes, such as Lake George, Champlain, Winnipisogee, Otsego, Seneca, and a hundred others, that stud like gems the bosom of this country. There is one delightful quality in nearly all these lakes—the purity and transparency of the water. In speaking of scenery it might seem unnecessary to mention this; but independent of the pleasure that we all have in beholding pure water, it is a circumstance which contributes greatly to the beauty of landscape; for the reflections of surrounding objects, trees, mountains, sky, are most perfect in the clearest water; and the most perfect is the most beautiful.

We would rather recommend a visit to the "Holy Lake," the beautiful "Horicon," than attempt to describe its scenery—to behold one rambling on its storied shores, where its southern expanse is spread, begemmed with isles of emerald, and curtained by green receding hills—or, perhaps, gliding over its bosom, where the steep and rugged mountains approach from either side, shadowing with black precipices the innumerable islets—some of which bearing a solitary tree, others a group of two or three, or a "goodly company," seem to have been sprinkled over the smiling deep in nature's frolic hour. These scenes are classic—history and genius have hallowed them. War's shrill clarion once waked the echos from these now silent hills—the pen of a living master has portrayed them in the pages of romance—and they are worthy of the admiration of the enlightened and the graphic hand of genius.

Though differing from Lake George, Winnipisogee resembles it in multitudinous and uncounted islands. Its mountains do not stoop to the water's edge, but through varied screens of forest may be seen ascending the sky softened by the blue haze of distance—on the one hand rise the Gunstock mountains; on the other the dark Ossipees, while above and far beyond, rear the "cloud-capt" peaks of the Sandwich and White mountains.

We will not fatigue with a vain attempt to

describe the lakes that we have named; but would turn our attention to those exquisitely beautiful lakes that are so numerous in the northern states, and particularly in New Hampshire. In character they are truly and peculiarly American. We know nothing in Europe which they resemble; the famous lakes of Albano and Nemi and the small and exceedingly picturesque lakes of Great Britain may be compared in size, but are dissimilar in almost every other respect. Embosomed in the primitive forest, and sometimes overshadowed by huge mountains, they are the chosen places of tranquillity; and when the deer issues from the surrounding woods to drink the cool waters, he beholds his own image as in a polished mirror—the flight of the eagle can be seen in the lower sky; and if a leaf falls, the circling undulations chase each other to the shores unvexed by contending tides.

There are two lakes of this description, situated in a wild mountain gorge called the Franconia Notch, in New Hampshire. They lie within a few hundred feet of each other, but are remarkable as having no communication—one being the source of the wild Ammonoosuck, the other of the Pemigewasset. Shut in by stupendous mountains which rest on crags that tower more than a thousand feet above the water, whose rugged brows and shadowy breaks are clothed by dark and tangled woods, they have such an aspect of deep seclusion, of utter and unbroken solitude, that, when standing on their brink a lonely traveller, we were overwhelmed with an emotion of the sublime, such as we have rarely felt. It was not that the jagged precipices were lofty, that the encircling woods were of the dimmest shade, or that the waters were profoundly deep; but that over all, rocks, wood, and water, brooded the spirit of repose, and the silent energy of nature stirred the soul to its inmost depths.

We would not be understood that these lakes are always tranquil; but that tranquillity is their great characteristic. There are times when they take a far different expression; but in scenes like these the richest chords are those struck by the gentler hand of nature.

And now we must turn to another of the beautifiers of the earth—the waterfall; which in the same object at once presents to the mind the beautiful, but apparently incongruous idea, of fixedness and motion—a single existence in which we perceive unceasing change and everlasting duration. The waterfall may be called the voice of the landscape, for, unlike the rocks and woods which utter sounds as instruments played on by the elements, the waterfall strikes its own chords, and rocks and mountains re-echo in rich unison. And this is a land abounding in cataracts; in these northern states where shall we turn and not find them?

Have we not Kaaterskill, Trenton, the Flume, the Genesee, stupendous Niagara, and a hundred others named and nameless ones, whose exceeding beauty must be acknowledged when the hand of taste shall point them out?

In the Kaaterskill we have a stream, diminutive indeed, but throwing itself headlong over a fearful precipice into a deep gorge of the densely wooded mountains—and possessing a singular feature in the vast arch: a cave that extends beneath and behind the cataract. At Trenton there is a chain of waterfalls of remarkable beauty, where the foaming waters, shadowed by steep cliffs, break over rocks of architectural formation, and tangled and picturesque trees mantle abrupt precipices, which it would be easy to imagine crumbling and "time-disparting towers."

And Niagara! that wonder of the world!—where the sublime and beautiful are bound together in an indissoluble chain. In gazing on it we feel as though a great void had been filled in our minds—our conceptions expand—we become a part of what we behold! At our feet the floods of a thousand rivers are poured out—the contents of vast inland seas. In its volume we conceive immensity; in its course, everlasting duration; in its impetuosity, uncontrollable power. These are the elements of its sublimity. Its beauty is garlanded around in the varied hues of the water, in the spray that ascends the sky, and in that unrivalled bow which forms a complete cincture around the unresting floods.

The river scenery of the United States is a rich and boundless theme. The Hudson for natural magnificence is unsurpassed. What can be more beautiful than the lake-like expanses of Tappan and Haverstraw, as seen from the rich orchards of the surrounding hills; hills that have a legend, which has been so sweetly and admirably told that it shall not perish but with the language of the land? What can be more imposing than the precipitous highlands; whose dark foundations have been rent to make a passage for the deep-flowing river? And, ascending still, where can be found scenes more enchanting? The lofty Catskills stand afar off—the green hills gently rising from the flood, recede like steps by which we may ascend to a great temple, whose pillars are those everlasting hills, and whose dome is the blue boundless vault of heaven.

The Rhine has its castled crags, its vine-clad hills, and ancient villages; the Hudson has its wooded mountains, its rugged precipices, its green undulating shores—a natural majesty, and an unbounded capacity for improvement by art. Its shores are not besprinkled with venerated ruins, or the palaces of princes; but there are flourishing towns,

and neat villas, and the hand of taste has already been at work. Without any great stretch of the imagination we may anticipate the time when the ample waters shall reflect temple, and tower, and dome, in every variety of picturesqueness and magnificence.

In the Connecticut we behold a river that differs widely from the Hudson. Its sources are amid the wild mountains of New Hampshire; but it soon breaks into a luxuriant valley, and flows for more than a hundred miles, sometimes beneath the shadow of wooded hills, and sometimes glancing through the green expanse of elm-besprinkled meadows. Whether we see it at Haverhill, Northampton, or Hartford, it still possesses that gentle aspect; and the imagination can scarcely conceive Arcadian vales more lovely or more peaceful than the valley of the Connecticut—its villages are rural places where trees overspread every dwelling, and the fields upon its margin have the richest verdure.

Nor ought the Ohio, the Susquehanna, the Potomac, with their tributaries, and a thousand others, be omitted in the rich list of American rivers—there are a glorious brotherhood; but volumes would be insufficient for their description.

In the forest scenery of the United States we have that which occupies the greatest space, and is not the least remarkable; being primitive, it differs widely from the European. In the American forest we find trees in every stage of vegetable life and decay—the slender sapling rises in the shadow of the lofty tree, and the giant in his prime stands by the hoary patriarch of the wood—on the ground lie prostrate decaying ranks that once waved their verdant heads in the sun and wind. These are circumstances productive of great variety and picturesqueness—green umbrageous masses—lofty and scathed trunks—contorted branches thrust athwart the sky—the mouldering dead below, shrouded in moss of every hue and texture, form richer combinations than can be found in the trimmed and planted grove. It is true that the thinned and cultivated wood offers less obstruction to the feet, and the trees throw out their branches more horizontally, and are consequently more umbrageous when taken singly; but the true lover of the picturesque is seldom fatigued—and trees that grow widely apart are often heavy in form, and resemble each other too much for picturesqueness. Trees are like men, differing widely in character; in sheltered spots, or under the influence of culture, they show few contrasting points; peculiarities are pruned and trained away, until there is a general resemblance. But in exposed situations, wild and uncultivated, battling with the elements and with one another for the possession of a

morsel of soil, or a favoring rock to which they may cling—they exhibit striking peculiarities, and sometimes grand originality.

For variety, the American forest is unrivalled; in some districts are found oaks, elms, birches, beeches, planes, pines, hemlocks, and many other kinds of trees, commingled—clothing the hills with every tint of green, and every variety of light and shade.

There is a peculiarity observable in some mountainous regions, where trees of a genus band together—there often may be seen a mountain whose foot is clothed with deciduous trees, while on its brow is a sable crown of pines; and sometimes belts of dark green encircle a mountain horizontally, or are stretched in well-defined lines from the summit to the base. The nature of the soil, or the courses of rivulets, are the causes of this variety; and it is a beautiful instance of the exhaustlessness of nature; often where we should expect unvarying monotony, we behold a charming diversity. Time will not permit me to speak of the American forest-trees individually; but I must notice the elm, the paragon of beauty and shade; the maple, with its rainbow hues; and the hemlock, the sublime of trees, which rises from the gloom of the forest like a dark and ivy-mantled tower.

There is one season when the American forest surpasses all the world in gorgeousness—that is the autumnal; then every hill and dale is riant in the luxury of color—every hue is there, from the liveliest green to deepest purple—from the most golden yellow to the intensest crimson. The artist looks despairingly upon the glowing landscape, and in the old world his truest imitations of the American forest, at this season, are called falsely bright, and scenes in fairy land.

The sky will next demand our attention. The soul of all scenery, in it are the fountains of light, and shade, and color. Whatever expression the sky takes, the features of the landscape are affected in unison, whether it be the serenity of the summer's blue, or the dark tumult of the storm. It is the sky that makes the earth so lovely at sunrise, and so splendid at sunset. In the one it breathes over the earth the crystal-like ether, in the other the liquid gold. The climate of a great part of the United States is subject to great vicissitudes, and we complain; but nature offers a compensation. These very vicissitudes are the abundant sources of beauty—as we have the temperature of every clime, so have we the skies—we have the blue unsearchable depths of the northern sky—we have the upheaped thunder-clouds of the torrid zone, fraught with gorgeousness and sublimity—we have the silver haze of England, and the golden atmosphere of Italy. And if he who has

travelled and observed the skies of other climes will spend a few months on the banks of the Hudson, he must be constrained to acknowledge that for variety and magnificence American skies are unsurpassed. Italian skies have been lauded by every tongue, and sung by every poet, and who will deny their wonderful beauty? At sunset the serene arch is filled with alchymy that transmutes mountains, and streams, and temples, into living gold.

But the American summer never passes without many sunsets that might vie with the Italian, and many still more gorgeous—that seem peculiar to this clime.

Look at the heavens when the thunder shower has passed, and the sun stoops behind the western mountains—there the low purple clouds hang in festoons around the steep—in the higher heaven are crimson bands interwoven with feathers of gold, fit for the wings of angels—and still above is spread that interminable field of ether, whose color is too beautiful to have a name.

It is not in the summer only that American skies are beautiful; for the winter evening often comes robed in purple and gold, and in the westering sun the iced groves glitter as beneath a shower of diamonds—and through the twilight heaven innumerable stars shine with a purer light than summer ever knows.

What has been considered a grand defect in American scenery is the want of associations, such as arise amid the scenes of the old world.

We have many a spot as umbrageous as Vallombrosa, and as picturesque as the solitudes of Vaucluse; but Milton and Petrarch have not hallowed them by their footsteps and immortal verse. He who stands on Mont Albano and looks down on ancient Rome, has his mind peopled with the gigantic associations of the storied past; but he who stands on the mounds of the west, the most venerable remains of American antiquity, may experience the emotion of the sublime, but it is the sublimity of a shoreless ocean un-islanded by the recorded deeds of man.

Yet American scenes are not destitute of historical and legendary associations—the great struggle for freedom has sanctified many a spot, and many a mountain, stream, and rock, has its legend, worthy of poet's pen or the painter's pencil. But American associations are not so much of the past as of the present and the future. Seated on a pleasant knoll, look down into the bosom of that secluded valley, begirt with wooded hills—through those enamelled meadows and wide, waving fields of grain, a silver stream winds lingeringly alone—here, seeking the green shade of trees—there, glancing in the sunshine: on its

banks are rural dwellings shaded by elms and garlanded by flowers—from yonder dark mass of foliage the village spire beams like a star. You see no ruined tower to tell of outrage—no gorgeous temple to speak of ostentation; but Freedom's offspring—peace, security, and happiness, dwell there, the spirits of the scene. On the margin of that gentle river the village girls may ramble unmolested—and the glad school-boy, with hook and line, pass his bright holyday—those neat dwellings, unpretending to magnificence, are the abodes of plenty, virtue, and refinement. And in looking over the yet uncultivated scene, the mind's eye may see far into futurity. Where the wolf roams, the plough shall glisten; on the gray crag shall rise temple and tower—mighty deeds shall be done in the now pathless wilderness; and poets yet unborn shall sanctify the soil.

It was our intention to attempt a description of several districts remarkable for their picturesqueness and truly American character; but the space to which we have been limited forbids it. Yet we can not but express sorrow that the beauty of such landscapes are quickly passing away—the ravages of the axe are daily increasing—the most noble scenes are made desolate, and oftentimes with a wantonness and barbarism scarcely credible in a civilized nation. The way-side is becoming shadeless, and another generation will behold spots, now rife with beauty, desecrated by what is called improvement; which, as yet, generally destroys Nature's beauty without substituting that of Art. This is a regret rather than a complaint; such is the road society has to travel; it may lead to refinement in the end, but the traveller who sees the place of rest close at hand, dislikes the road that has so many unnecessary windings.

We conclude, with the hope that, though feebly urged, the importance of cultivating a taste for scenery will not be forgotten. Nature has spread for us a rich and delightful banquet. Shall we turn from it? We are still in Eden; the wall that shuts us out of the garden is our own ignorance and folly. We should not allow the poet's words to be applicable to us:—

"Deep in rich pasture do thy flocks complain?
Not so; but to their master is denied
To share the sweet serene."

May we at times turn from the ordinary pursuits of life to the pure enjoyment of rural nature; which is in the soul like a fountain of cool waters to the wayworn traveller; and let us

"Learn
The laws by which the Eternal doth sublime
And sanctify his works, that we may see
The hidden glory veiled from vulgar eyes."

DIVISIONS OF THE GLOBE.

THE natural division of the surface of the globe is into sea and land, about three fourths of the whole being occupied by water, although probably nowhere to a depth beyond two or three miles. The remaining fourth consists of land elevated more or less above the level of the sea, interspersed in some parts with smaller collections of water at various heights, and in a few instances somewhat lower than the general surface of the main ocean. Thus, the Caspian sea is said to be about three hundred feet lower than the ocean, and in the interior part of Africa, there is probably a lake equally depressed. We can not observe any general symmetry in this distribution of the earth's surface, except that the two large continents of Africa and South America, have some slight resemblance in their forms, and that each of them is terminated to the eastward by a collection of numerous islands. The large capes projecting to the southward, have also a similarity with respect to their form, and the islands near them. To the west, the continents are excavated into large bays, and the islands are to the east. Thus Cape Horn, has the Falkland islands; the Cape of Good Hope, Madagascar; and Cape Comorin, Ceylon to the east. The great continent, composed of Europe, Asia and Africa, constitutes about a seventh of the whole surface of the earth; America, about a sixteenth; and New South Wales, about a fifth; or, in hundredth parts of the whole, Europe contains two; Asia, seven; Africa, six; America, six; and Australia, two; the remaining seventy-seven being sea; although some authors assign seventy-two parts only out of one hundred to the sea, and twenty-eight to the land. These proportions may be ascertained with tolerable accuracy, by weighing the paper made for covering a globe, first entire, and then cut out, according to the terminations of the different countries. Or, if still greater accuracy were required, the greater part of the continents might be divided into known portions of the whole surface, and their remaining irregular portions alone weighed. It will be seen, even by a superficial glance, at an artificial globe, that the great preponderance of land lies toward the northern hemisphere or half; all the continents lie in this direction, and to the south, is a wide expanse of ocean, studded with numerous small and scattered groups of islands. It will be observed, too, that the continents stretch from the north pole, toward the equator and south pole, or parallel to the lines of longitude, not across or parallel to the equator. The general inclinations and levels of the continents are discovered by the course of their

rivers. Of these some of the principal are, the Amazon, the Missouri, the Mississippi, the Niger, the Arkansas, the Nile, the Kian-Ku, the St. Lawrence, the Hoang-ho, the Amour, the Rio del Norte, the Volga, the Yensei, the Oby, the Danube, the Indus, the Orinoco, the Ganges, the Euphrates, the Senegal, and the Dnieper; and this is nearly the order of their magnitudes.

We may form a pretty accurate idea of the levels of the ancient continent, by tracing a line across it in such a direction as to pass no river, which will obviously point out a tract of country higher than most of the neighboring parts. Beginning at Cape Finisterre, we soon arrive at the Pyrenees, keeping to the south of the Garonne, and the Loire. After taking a long turn northward to avoid the Rhine, we come to Switzerland; and we may approach very near to the Mediterranean in the state of Genoa, taking care not to pass the branches of the Po. We make a circuit in Switzerland, and pass between the sources of the Danube and of the branches of the Rhine and Swabia. Crossing Franconia, we leave Bohemia to the north, in order to avoid the Elbe, and coming near to the borders of Austria, follow those of Hungary, to the south of the Vistula. The Dnieper then obliges us to go northward through Lithuania, leaving the Don wholly to the right, and the Volga, to pass still farther north, between Petersburg and Moscow. We may then go eastward to the boundaries of Asia, and thence northward to Nova Zembla. Hence we descend to the west of the Oby, and then to the east of the branches of the Volga, and the other inland rivers flowing into the lake Arel, and the Caspian sea. Here we are situated in the widely-extended elevation of India, in the neighborhood of the sources of the Indus; and lastly in our way hence toward Kamschatka, we leave Yensei, and Lena, on the left, and the Ganges, &c., on the right. The direction of the most conspicuous mountains is, however, a little different from this. The principal chain first constitutes the Pyrenees, and divides Spain from France; then passes through Auvergne, to join the Alps, and through the south of Germany, Dalmatia, Albania, and Macedonia. It is found again beyond the Euxine, under the name of Taurus, Caucasus, and Imaus, and goes on to Tartary, and Kamschatka. The peninsula of India, is divided from north to south, by the mountains of Gate, extending from the extremity of Caucasus, to Cape Comorin. In Africa, Mount Atlas stretches from Fez to Egypt, and the Mountains of the Moon run nearly in the same direction. There is also a considerable elevation between the Nile and the Red sea. In the New World, the neigh-

THE FALL OF BABYLON.

borhood of the western coast is in general the most elevated. In North America, the Blue mountains, or Stony mountains, are the most considerable, and the mountains of Mexico join the Andes or Cordilleras, which are continued along the whole of the west coast of South America. There are several points in both hemispheres, from which we may observe rivers separating to run to different seas. The highest mountains in the world are the Himalaya range, in Asia, which are upward of twenty-eight thousand feet; Chimborazo, in America twenty-one thousand; the Abyssinian mountains in Africa, from ten to fifteen thousand; Mount Blanc, in Switzerland, fifteen thousand; and the Apennines, upward of nine thousand feet. The plains of Quito, in Peru, are so much elevated, that the barometer stands at the height of fifteen inches only, which at the level of the sea, stands at thirty inches; thus the air is reduced to half its density. But none of these heights is equal to a thousandth part of half the earth's diameter, and the greatest of these might be represented as grains of sand on a six-inch globe.

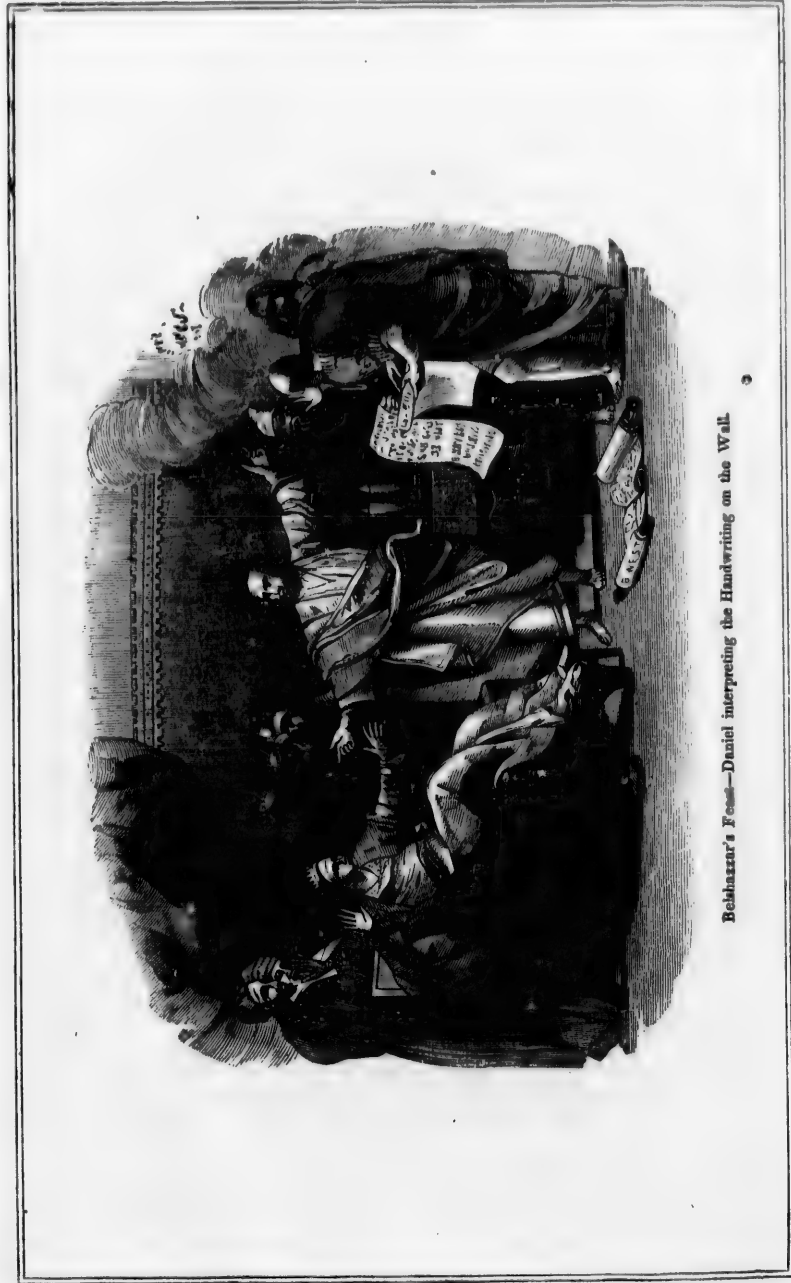
The internal parts of the body of the earth are little known from actual observation, as the deepest mines or excavations, are comparatively as but scratches on the end of an apple. The real density of the earth then, beyond the mere surface, is but matter of conjecture. From observations on the attraction of the mountain Shehallion, Dr. Maskylen supposed the actual mean density of the earth throughout all its mass to be that of water as 4½ to 1, judging from the probable density of the internal substance of the mountains, which he supposed to be a solid rock. Mr. Cavendish, has concluded more directly, from experiments on a mass of lead, that the mean density of the earth is to that of water as 5½ to 1. This density assigned by Mr. Cavendish, is not at all greater than might be conjectured, from observations on the vibrations of pendulums. The great Newton had long ago advanced it as a probable supposition, that the mean density of the earth might be about five or six times as great as that of water, and the perfect agreement of the result of many modern experiments with this conjecture, affords us a new proof, in addition to many others, of the accuracy and penetration of that illustrious philosopher.

TRUTH and JUSTICE are the immutable laws of social order. Far from us be the dangerous maxim, that it is sometimes useful to mislead, to enslave, and to deceive mankind, to insure their happiness. Cruel experience has at all times proved, that with impunity, these sacred laws can never be injured.

The history of the fall of Babylon may be found at large in Herodotus, and in JOSEPHUS'S *Antiquities of the Jews*. It is likewise described by Strabo, Xenophon, and Diodorus Siculus. The profligacy and impiety of Belshazzar, king of Babylon, grandson of Nebuchadnezzar, had excited the Divine anger, and at the visible interposition of the God whom he had derided and blasphemed, he lost at once his kingdom and his life. Having provided a splendid entertainment for the nobles of his court, he commanded to be brought the golden cups, those spoils of the Jewish temple which Nebuchadnezzar, after his successful siege of Jerusalem, had carried into the sanctuary of his own god. These splendid goblets he ordered to be used by his guests in their drunken revelry: thus not only profaning the sacred vessels originally devoted to the purposes of the Jewish ceremonial worship, but likewise polluting those of his country's gods; as those Jewish vessels had been consecrated to the rites of his own religion. This double sacrilege did not pass without its retribution. During the feast, the most odious blasphemies were uttered by the king and the revellers who composed his court. They sang praises to those divinities of wood and stone which were the objects of their hollow adoration, as if in mockery of Him, who, though "mighty to save," proved to the Chaldean king and his nobles, that he is mighty also to destroy.

In the midst of their impious feast, the finger of God inscribed their sentence upon the wall of the court in which they were audaciously deriding him. While in the very act of profaning the sacred vessels, the king perceived, to his utter consternation, a hand tracing upon the wall in legible characters, the terrible record of his doom. Astounded at a sight so singular and appalling, he sent for the astrologers, who at that time were regularly retained in the eastern courts, together with all persons who had acquired repute as diviners, prophets, and interpreters of dreams. From these he demanded an explanation of the mysterious writing. The seal of God, which they could not break, was upon it. Amazed and confounded, the king dismissed them, and called others to unveil the fearful mystery in which his destiny appeared to be shrouded. No one could read the record. The royal blasphemer was abashed, and his conscience shrunk from the apprehension of impending destruction.

Nitocris, his mother, a woman of masculine energies, who had successfully fortified her native city against the Medes and Persians, roused the effeminate king from the stupor of



Belshazzar's Feast—Daniel interpreting the Handwriting on the Wall.

despair, by telling him to send for Daniel the Jew. This "servant of the living God," as he is elsewhere styled in Scripture, was then, with many of his countrymen, in captivity at Babylon, and had rendered himself celebrated among the Chaldeans, by having interpreted the dreams of Nebuchadnezzar. The king accordingly sent for the prophet, and desired him to interpret the writing which had baffled the penetration of all his wise men. The Chaldean monarch promised to bestow upon Daniel the third part of his dominions, if he should succeed in unfolding the awful mystery still visible upon the wall, where it had been traced by a supernatural hand. But, to use the words of Josephus, "Daniel desired that he would keep his gifts to himself; for that which is the effect of wisdom and of Divine revelation admits of no gifts, and bestows its advantages on petitioners freely; nevertheless, that he would explain the writing to him, which denoted that he must soon die, and this, because he had not learned to honor God. And moreover, because he had quite forgotten how Nebuchadnezzar was removed to feed among wild beasts for his impieties, and did not recover his former life among men and his kingdom, but upon God's mercy to him, after many supplications and prayers; who did therefore praise God all the days of his life, as one of almighty power, and who takes care of mankind." Daniel also put Belshazzar in mind how greatly he had blasphemed against God, and had made use of his sacred vessels among his depraved nobles and concubines. That, therefore, God seeing this, was displeased with him, and had declared by this writing that his life would have a most awful termination. He then explained the writing as follows.—**MENE:** This, if it be expounded in the Greek language, will signify a *number*, because God has numbered so long a time for thy life and for thy government, and that there remains but a small portion.—**TEKEL:** This signifies a weight, and means that God has weighed thy kingdom in the balance, and finds it already on the decline.—**PHARES:** This also, in the Greek tongue, signifies a fragment: God will therefore break thy kingdom in pieces, and divide it among the Medes and Persians."

The king was confounded at this interpretation; nevertheless, he bestowed upon Daniel what he had promised. Immediately after, the city was taken, and Belshazzar put to death. The manner of its capture was singular. About 540 years before the birth of Christ, Cyrus the Great had invested the capital of Chaldea. His armies had been everywhere victorious; yet trusting in the prodigious strength of their city, and the wise coun-

sels of Nitocris the queen's mother, the Babylonians derided the efforts of the Persian. They had provisions sufficient for a consumption of twenty years. The walls of their city were of prodigious strength, being three hundred and fifty feet high, and eighty-seven thick. They were built of bricks, formed of a material so firm in texture, as to be harder than granite. These bricks were cemented together with a glutinous earth that in time became as hard as the masses which it united.

In spite of all these mighty obstacles, Cyrus resolved upon the reduction of this apparently impregnable capital. To this end he constructed a number of wooden towers, higher than the walls, and made many desperate efforts to carry the place by storm; but every attempt was foiled. He next drew a line of circumvallation round the city, thus hoping to starve the enemy into a surrender. Two years were spent in this unavailing blockade, when an opportunity presented itself of effecting that purpose by stratagem, which he had hitherto failed to accomplish by open force. Having heard that the king was about to celebrate a great festival, and knowing, from his licentious character, that it would be a scene of the grossest riot, he posted a part of his army close to the spot where the river Euphrates entered the city, and another at the opposite side where it passed out, with orders to enter the channel wherever it was fordable. He then detached a third party to open the head of a canal connected with the Euphrates, and thus admit the river into the trenches which he had opened round the city. By these means the river was so completely drained by midnight, that the troops easily made their way along its bed, and the gates upon the banks having been left unclosed, in consequence of the revels, or neglected during the confusion of the festival, the besiegers found no interruption to their progress. Having thus penetrated into the heart of the enemy's capital, they met, according to agreement, at the gates of the palace. Here, after a feeble resistance, they easily overpowered the guards, cut to pieces all who opposed them, slew the king, and within a few hours received the submission of Babylon the mighty. From this period it ceased to be the metropolis of a kingdom, and its grandeur rapidly declined. Not a memorial now remains of its former greatness, and scarcely even a trace of its site.

"Where now are Troy and mightier Babylon?
On their proud site the earth is wild and bare,
O'er them stern Time has a full victory won,
And they are mingled with the things that were.
Thus works destruction; from his secret lair
He skulks abroad to mar what man has made;—
Decay, slow ming, meets us everywhere.
Earth's pageantries are fugitive—here fade
All things alike—the debts of nature must be paid."



The Fall of Babylon.

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In the engraving of the fall of Babylon, the artist has endeavored to exhibit the Chaldean capital at the height of its glory. In the distance, the mighty tower of Babel, which he supposes to have been still standing upon the plains of Shinar, rears its stupendous bulk, hiding its summit in the clouds, a monument of human presumption and human impotency.

The high tower upon the bank of the river is the celebrated temple of Belus, the external buildings of which were raised by Nebuchadnezzar. This huge tower was six hundred feet square at the base, and the same number of feet high. The temple was set apart for the worship of Baal, and the treasure contained within its walls, in the palmy days of the Chaldean empire, has been estimated at forty-two millions sterling.

Upon the right of the temple of Belus, as the spectator faces the water on that side, stands the palace of Semiramis, four miles in circumference. To this extraordinary woman Babylon first owed its greatness. She left everywhere immortal monuments of her genius and of her power. She was the greatest warrior of her time. To facilitate communication with her capital, she hollowed mountains and filled up valleys, and water was conveyed at a vast expense by immense aqueducts, to deserts and unfruitful plains.

The bridge seen in our engraving was built by Nitocris, the mother of Belshazzar. In the right-hand corner of the engraving is seen the palace of Nebuchadnezzar, eight miles in circumference, and surmounted by the celebrated hanging gardens. These occupied a square of four hundred feet on every side, and consisted of spacious terraces raised one above the other, until they reached the height of the city walls. The whole pile was sustained by immense arches, built upon other arches, and supported on either side by a wall twenty-two feet thick.

The crowd which appears in the bed of the river is the enemy setting fire to the Babylonian navy. On the right of these is the Persian horse headed by Cyrus. The group in the near foreground consists of the king, and a party of the enemy; these attack and destroy him in sight of several of his concubines, who had escaped with him from the palace.

Here is one of those awful pages in the records of time, which may be summed up in this brief exclamation, "How are the mighty fallen!"

THE lust of dominion innovates so imperceptibly, that we become complete despots before our wanton abuse of power is perceived; the tyranny first exercised in the nursery is exhibited in various shapes and degrees in every stage of our existence.

INDIANS IN OREGON.

WE will first describe the Indians of the plains. These live in the upper country from the falls of the Columbia to the Rocky mountains, and are called the Indians of the plains, because a large proportion of their country is prairie land. The principal tribes are the Nez Percés, Cayuses, Walla Wallas, Banax, Shoshones, Spokeins, Flatheads, Cœur de Lions, Ponderas, Cootanics, Kettlefalls, Okanagans, and Carriers. These do not include probably more than one half of those east of the falls; but of others we have obtained but little definite knowledge. These all resemble each other in general characteristics. In their persons the men are tall, the women are of common stature, and both men and women are well formed. While there is a strong natural, as well as moral resemblance among all Indians, the complexion of these is much the same as other Indians, excepting a little fairer. Their hair and eyes are black, their cheekbones high, and very frequently they have aquiline noses. Their hands, feet, and ankles, are small and well formed; and their movements are easy, if not graceful. They wear their hair long, part it upon their forehead, and let it hang in tresses on each side, or down behind.

There is a great resemblance in their dress, which generally consists of a shirt, worn over long close leggings, with moccasins for their feet. These are of dressed leather made of the skins of deer, antelope, mountain goats, and sheep; and over these they wear a blanket or buffalo robe. The borders of their garments are ornamented with long fringes, after the manner of the ancient Jews. They are fond of ornaments, and according to their means, their heads and garments are decorated with feathers, beads, buttons, and porcupine quills; the last of which are colored red, yellow, blue, and black, and worked with great skill and variety of design. They appear to have less of the propensity to adorn themselves with painting, than the Indians east of the mountains; but still at their toilet, vermilion, mixed with red clay, is used upon their faces and hair. The dress of the women does not vary much from the men, excepting, that, instead of the shirts, they have what may be called a frock coming down to the ankles. Many of them wear a large cape made of the same material, and often highly ornamented with large oblong beads of blue, red, purple, and white, arranged in curved lines covering the whole. Some of the daughters of the chiefs, when clothed in their clean white dresses made of antelope skins, with their fully ornamented capes coming down to the waist, and mounted upon spirited steeds, going at full speed, their or-

naments glittering in the sunbeams, make an appearance that would not lose in comparison with equestrian ladies of the east.

Their horses are not less finely caparisoned with blue and scarlet trimmings about their heads, breasts, and loins, hung with little brass bells.

While a want of cleanliness is a characteristic of all heathen, the Indians of the plains are less reprehensible than others, and far more neat than those of the lower country toward the Pacific. It is not to be understood that there are not those who are poor, suffering from the want of food and clothing.

Their wealth consists in their horses, and, in a great degree, their consequence upon the number they possess; some owning several hundreds; and that family is poor whose numbers are not sufficient for every man, woman, and child, to be mounted, when they are travelling from place to place; and also to carry all their effects. In these respects they are far better supplied than any tribes we saw east of the mountains. While their horses are their wealth, they derive but little from them for the support of themselves and families; for they do not employ them to cultivate the earth; and the market for them is so low, that they command but a small price. A good horse will not sell for more than enough to purchase a blanket, or a few small articles of merchandise. For subsistence, they, of necessity, depend upon hunting and fishing, and gathering roots and berries. Their mode of cooking is plain and simple. Most of their food is roasted, and their excel in roasting fish. The process is to build in the centre of their lodge a small fire, to fix the fish upon a stick two feet long, and to place one end in the ground, so as to bring the fish partly over the fire, and then, by a slow process, it is most thoroughly roasted without any scorching, or scarcely changing the color. The principal art consists in taking time, and our best cooks might improve by following their mode.

Their habits. The habits of Indians are said to be indolent. As a general remark it may be true, but we saw but very little to confirm its truth among the Indians of the plains; for we rarely saw any of these Indians without their being engaged in some object of pursuit; not the most productive, perhaps, but such as enlisted their attention. While we believe in the striking resemblance, both physical and moral, of all the different nations and tribes of Indians spread over large portions of the continent of America, more so than is seen in any people of any other country of equal extent; yet, if it is true, that as a general fact, they are morose and gloomy in their countenances; sullen, or bacchanalian in their dispositions; that they are rarely so joyful as

to laugh, unless excited by ardent spirits; that they are taciturn and never indulge in mirth; that they are obtuse in sympathy, and destitute of social affections; that in proud disdain they turn away from whatever would excite curiosity; that no common motives or endearments excite them to action; if these things are true, then the Indians in the Oregon territory are an exception to the general fact. In all the abovenamed particulars, we saw no special difference between them and other nations. As a part of the human family, they have the same natural propensities, and the same social affections. They are cheerful and often gay, sociable, kind, and affectionate; and anxious to receive instruction in whatever may conduce to their happiness here and hereafter. It is worse than idle to speak of "physical insensibility wrought into the animal nature of the Indians, so that their bodies approximate to the insensibility of horses' hoofs." The influence of this kind of remarks is to produce, in the bosoms of all who read them, the same insensibility which is charged upon the native character of the Indians. To represent their characters and their restoration to the common feelings of humanity so hopeless, is to steel the heart of even Christianity itself, if it were possible, against all sympathy, and to paralyze all exertions and efforts to save them from the twofold destruction to which they doom them, temporal and eternal. Is this the reason that Christians are sitting in such supineness over their condition, and the heart-thrilling appeals from them for teachers to enlighten them? Is this the reason, that while the philanthropy of the United States' citizens toward them is so widely blazoned, that those, who are sent to teach them the arts of civilized life, are sitting quiet on the borders in governmental pay, while the Indians are roaming still over the prairies in search of uncertain and precarious game? We forbear to tell the story.

They have but a few manufactures, and those few are the most plain and simple, not extending much beyond dressing the skins of animals, and making them into clothing; making bows and arrows, and some few articles of furniture. In dressing their skins, they never make any use of bark, or tanning in any way. Their process is to remove the hair and flesh from the skins, by scraping them with a hard stone or wood, or, when it can be obtained, a piece of iron hoop, and then besmearing them with the brains of some animal, they smoke them thoroughly, and rub them until they are soft; and after this bleach them with pure white clay. Their mode of smoking, is to dig or excavate a small place in the ground, about a foot deep, and over this to construct a small fixture in the form of a lodge, a few

feet wide at the top, the ceiling of the frame almost about the same skin upon it down with a cooper with a like a remain After work until ness, same brough labor how one o for it or a b gener The wood mals, made are n with other the f direc astor with M now do n pail bow ly fi thos horr hav buff of b dles ish risi unc are of h ho is wh do mo oft gre ne

feet wide at the base, and brought to a point at the top. Then they build a small fire in the centre, and place the skins around upon the framework, so as to make the enclosure almost smoke tight. The process occupies about one day. Their mode of dressing buffalo-robos is different. It is by stretching the skin upon the ground, flesh-side up, fastening it down with pins around the border. Then with an instrument formed somewhat like a cooper's adz, made of stone, or wood overlaid with a piece of iron, brought to a blunt edge, like a currier's knife, they clear from it all remaining flesh, and let it thoroughly dry. After this, with the same instrument, they work upon it with a pounding, hewing stroke, until they have brought it to a suitable thickness, and rendered it soft and white, in the same condition as our buffalo-robos are, when brought into market. It is a work of great labor performed by women. We little think how much toil it costs a woman to prepare one of these robes, and then how little is paid for it by the purchaser; a pound of tobacco, or a bunch of beads, is as much as the Indian generally receives.

Their bows are made of the most elastic wood, strengthened with the tendons of animals, glued upon the back side, and a string made of the same substance. Their arrows are made of heavy wood, with one end tipped with a sharp stone or pointed iron, and the other end pinnated with a feather. While the first is to pierce, the latter is to govern the direction. Their bows and arrows perform astonishing execution, and they manage them with great dexterity.

Most of their cooking utensils, which they now use, are obtained from traders. These do not often extend beyond a brass kettle, tin pail, and a very few knives. They have bowls which they manufacture very ingeniously from the horns of buffalo; and sometimes, those that are large and more solid, from the horn of the big-horned mountain sheep. They have spoons of very good structure, made of buffalo-horns; also, they have various kinds of baskets of rude workmanship. Their saddles are rude, somewhat resembling the Spanish saddle, having a high knob forward, and rising high on the back part, generally sitting uneasy upon the horse's back. Their bridles are only a rope, well made of hair, or the shag of the buffalo, fastened to the under jaw of the horse, very long, so as to form the lasso; this is so coiled in the hand as to form a noose when thrown over the horse's head, which is done very dexterously; and when they are mounted, the rope, or leather thong, which is often used in its place, trails along upon the ground. This is often left upon the horse's neck, when he is turned out for a short time

to feed, for the convenience of more easily catching him.

Their canoes, before they obtained iron hatchets of the traders, were, with great labor and patience, made with hatchets of stone; and even now, it is with no small effort. A canoe of good construction is valued as high as one or two good horses. Their fishing nets are another article which is well constructed, formed of wild flax; and in every particular like our scoop nets.

THE MIGRATION OF BIRDS.

"As fables tell, an Indian sage,
The Hindostani woods among,
Could, in his desert hermitage,
As if 'twere marked in written page,
Translate the wild bird's song.

"I wish I did his power possess,
That I might learn, fleet bird, from thee,
What our vain systems only guess,
And know from what wide wilderness
You came across the sea."

The migration of the feathered race has occupied much attention, and afforded subject for many interesting inquiries, from a very early period. Nor is the topic exhausted; numerous important facts still remain unexplained; and a vast field for observation still presents itself to scientific search.

Birds migrate northward and southward; so that there is in our latitudes at least a periodical ebb and tide of spring and winter visitors. The former gradually work their way, as the season advances, from the warm regions of the south, where they have enjoyed food and sunshine, and have escaped the rigors of our winter, and arrive here to cheer us with their songs, and to make our summer months still more delightful. The latter, being inhabitants of the arctic circle, and finding in the forests and morasses of that region a sufficient supply of food in summer, are only led to quit their homes when the early winter begins to bind up the lakes and the surface of the earth, and to deprive them of sustenance. It is then that they seek our milder shores; and, accordingly, at the season when our summer visitants are leaving us to proceed on their journey southward, these songless inhabitants of the north arrive to take their places, and to feed on such winter fruits and berries, and such insects and aquatic plants, as are denied to their own inhospitable climate. These visitors, though mute, are of no mean value; for many of them are esteemed as delicate food; and, in consequence, the redwing, fieldfare, woodcock, snipe, widgeon, &c., are wont to receive homage and admiration from those who could listen to the sweet warblings of the

nightingale or the tender cooings of the turtle-dove with perfect indifference.

The visits of these birds, as well as of those from the south, depend greatly on the state of the weather, which appears to hasten or retard their flight as the season may be. Thus, we often find that a few of our summer birds leave the main body, and arrive sooner than the rest, while the others have been kept back by a sudden return of unfavorable weather, according to the adage, "One swallow does not make a summer." It is a singular fact, that the early-comers are male birds, arriving, as it would seem, in search of a fit spot to which to introduce their mates. The bird-catchers are aware of this, and prepare their traps accordingly, so that nightingales and other singing-birds are often snared on their first arrival, and spend the short remainder of their lives in captivity. Many birds return not only to the same country, but to the very spot they left in the preceding season, a fact which has been ascertained by catching and marking some of them, while other birds do not confine themselves to a particular country, but range from one to another, as circumstances may dictate.

It has been observed that certain migratory birds do not leave their summer abode, unless the winter is to be one of unusual severity. This fact is surprising, and the question, "By what means is the bird instructed as to the coming season?" naturally presents itself to the mind, but still remains unanswered. What their instinctive knowledge is, and whether they have any power of reflecting on the phenomena by which they are surrounded, will ever probably be a mystery to us; but we may trace in this, as in numberless other instances, the care and wise management of a superintending Providence, by which creatures small and insignificant in the scale of creation are left to choose the climate most favorable to them, and to hasten toward another region just at the period when a longer tarry in the one they inhabit would be fatal to them.

"Where the northern ocean, in vast whirls
Boils round the naked melancholy isles
Of furthest Thule, and the Atlantic surge
Pours in among the stormy Hebrides,
Who can recount what transmigrations there
Are annual made? what nations come and go?
And how the living clouds on clouds arise!
Infinite wings! till all the plume-dark air
And rude resounding shore are one wild cry."

Most birds perform their migrations during the night; but there are some that travel only by day, and others that stop not either by night or by day. Among the first are the owl, blackbird, &c., and a great number of aquatic birds; among those that travel by day, are the crow, pie, titmouse, wren, woodpecker, chaffinch, goldfinch, lark, swallow, and some oth-

ers; and of those which do not interrupt their flight are the heron, wagtail, yellowhammer, stork, crane, plover, swan, and wild goose. These choose a bright moonlight season in which to set out on their journey.

The flight of birds has been estimated from fifty to a hundred and fifty miles an hour, though some heavy birds scarcely exceed thirty miles an hour. Bishop Stanley mentions, in his "Familiar History of Birds," an easy way by which the flight of birds may be determined with tolerable accuracy. Supposing any bird—a partridge, for instance—should rise from the middle of the stubble, and fly a straight line over a hedge, all the observer has to do is to note by the second's hand of a watch the number of seconds between the bird's rising and that of its topping the hedge; and then ascertain the distance between the point whence it rose and the hedge, by stepping and counting the number of paces; when, supposing each pace to be a yard, we have a common rule-of-three sum. Thus, if a partridge in three seconds flies one hundred yards, how many yards will it fly in thirty-six hundred seconds, or one hour?

Another method of ascertaining the flight of birds is by carrier-pigeons. The same author tells us of a recent instance, in which fifty-six of these birds were brought over from Holland, and set at liberty in London. They were turned out at half-past four o'clock in the morning, and all reached their dove-cots at home by noon; but one favorite pigeon, called "Napoleon," arrived about a quarter before ten o'clock, having performed the distance of three hundred miles at the rate of above fifty miles an hour, supposing he lost not a moment and proceeded in a straight line; but, as they usually wheel about in the air for some time before they start, the first bird must have flown, most likely, at a still quicker rate.

It is probable that most birds perform their journey to distant countries by stages of a few hours' flight, resting and recruiting their strength in convenient situations. We need not suppose them often to cross the wide expanse of the ocean, but take it at its narrowest portions, as the channel between France and England, the Mediterranean, &c., and so pursuing their way across the continent. Their power of remaining on the wing does not excite so much surprise as do the motives which lead them to undertake such distant flights, and the instinct which guides them so unerringly in their aerial course; for though we have named the deficiency of food as one of the probable causes of migration, this does not apply in many cases; and we are more and more at a loss to account for the facts relating to several species of the feathered race.

Of all migrating birds the cranes may perhaps be considered the most remarkable. They seem to be most endowed with foresight, and have every appearance of consultation and regular preparation for the time of their departure. They utter peculiar cries several days before, and assemble with much noise and bustle. They then form themselves into two lines, making an angle, at the vortex of which one of their number, who is looked upon as the general director of their proceedings, takes his place. The office of the leader seems to be to exercise authority and issue orders to the whole party, to guide them in inclement weather in their circling flight, to give the signal for their descent, feeding, &c. Piercing cries are heard, as if commanding and answering to the command. If the leader grows tired, his place is taken by the next bird, while he retires to the end of the line; and thus their orderly flight is accomplished.

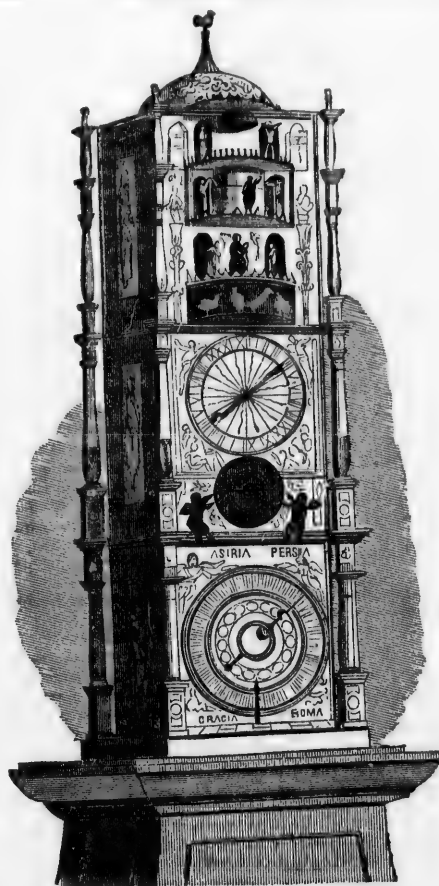
In order that birds may fly with ease and continue long on the wing, they must fly against the wind; and patiently do they wait for a favorable time in this respect. The sudden change of the wind will sometimes cause numbers of quails, which are heavy in their flight, to be drowned in crossing the Mediterranean sea. Yet there are certain seafaring birds so wonderfully endowed as to remain almost continually on the wing, and which are often found at the distance of more than a thousand miles from land. The gigantic albatross is one of these, with its enormous expanse of wing, measuring fourteen feet, or even more, from tip to tip. But the bird which surpasses all others in its power of flight is the frigate-bird, which seldom visits the land except at the breeding season, and is never seen to swim or rest upon the waters. With such an instance of adaptation to the regions of the air, we need no longer wonder at the power by which our birds are enabled to remain so long on the wing as to perform their periodical migration to other lands.

"Ye tell us a tale of the beautiful earth,
Birds that overweep it in power and mirth;
Yet, through the wastes of the trackless air,
Ye have a guide; and shall we despair?
Ye over desert and deep have passed:
So shall we reach our bright home at last."

THE ENGLISH LANGUAGE.

THE circulation of our *language*, will seem to us no slight advantage, when we think on its long consecration as the vehicle of religious ideas and of noble sentiments. In libraries, where now it is almost impossible to think of such a collection, the minds of our theologians

and moralists will be presented and embalmed. Suffering no injury from translation, the originals will be explored. Intercourse will find the benefit of such a medium. Of such a speech who but can be proud? In all the properties of a language it is great. Its thrilling vocables, its significant powers, its fine discriminations, its majestic compounds, leave us nothing to desire. Its tones stir like a clarion and sooth like a lute. There is a philosophic radix and a multitudinous expression. It has incorporated each image of nature, and attuned itself to every chord of sympathy. In it men have been accustomed to think with vigor and freedom, until it is only fit for the independent and the free. The treasures imbedded in it are confessedly unparalleled. It has not been unfashionable to depreciate it and to declaim against its uncouthness, asperity, and poverty. Of the justice of these charges we are very skeptical. Though it declines to admit, and is incapable of receiving, the trivial, the unnatural, and the unnatural—it loves to adopt some sterling dialect—magnificent stores—sumptuous tributes—such as Plato expounded and Cicero enunciated. The scions grafted on it are quickly converted to its own temperament and fibre. At this moment science has made it her favorite hold, and our literature stamps upon it an undecaying permanence. It is "married to immortal verse." It must always be studied, should it ever become obsolete and dead: its poetry, its criticism, its legislation, its science, its ethics, insure it an immortality. Commerce repeats it, new worlds invoke it as their parent speech, and we dictate it to our antipodes. Without an augury, we may predict its course. It bears with it a train of master-spirits. Wherever the emigrant wander he will talk it, though it be only to the echoes. Wherever the lion-standard or the eagle-banner sweeps the air and flaps to the wind, the settler loves to sing his native lays. Rivers unknown to song, forests which the axe is just beginning to thin of the trunks which centuries have rooted, deserts in which until almost now the beast of prey prowled unmolested and not a flower grew—resound to the words of our households, our exchanges, our temples! Who can but exult that the strong, the vivid, the flowing language, which in our infancy we lisped, seems destined to become the utterance of knowledge, of virtue, of freedom! the passport, through the nations, of generous and manly sentiment, of pure and exquisite emotion! the signal-cry to the desponding spirit of patriotism! the key-note of the uplifted chorus of liberty! the holy accents by which Christianity shall proclaim its message of peace and good-will to men! As from an urn, or rather a river-source, what blessings will our idiom pour out upon the world!



Clock constructed by Isaac Habrecht, A. D. 1589.

CURIOUS CLOCK.

THE ingenious piece of workmanship which our engraving represents, was for more than two centuries in the possession of the court of the popes of Rome; and was subsequently the property of William the First, king of the Netherlands.

Its construction is very interesting, as showing the state of clock-making toward the close of the sixteenth century: as well as by the original airs it performs, affording an idea of the taste for music in those times.

The entire fabric bears decided proof of having been produced by manual labor, without any other assistance than the bench of the turner and the file. It had the ancient motive power; the pendulum being a later invention of the celebrated Christian Huygens, a native of the Netherlands, who applied it to the movement of clocks in 1657; and it has since been added to the present clock.

The design consists of a tower, divided into three stories, with doors of strongly gilt copper, tastefully chased and ornamented, and supported by twelve columns of strongly gilt

copper. In front of the lower story, within a square chamber, is a large dial plate, which moves round its whole circuit only once a year: it shows also, the date of the month, and all the catholic feasts and holy days throughout the year. In the centre is a small plate, very curiously chased, representing the twelve signs of the zodiac, with the sun and moon pursuing their course, so that at one glance we can ascertain in what sign of the zodiac they are at the time. Within this circle is a small globe, pointing out the proper phases and aspects of the moon; and within all this are the fixed stars setting, namely, the Serpent, Orion, Great Bear, Cassiopeia, &c. The four corners of this chamber are emblematically engraved with the names of those nations who have conquered kingdoms at an early period.

In front of the second story are the minutes and minute-hand, and on each side are two silver figures, one hand of these figures pointing to the minutes, the other hand being set in motion by mechanism: during the striking of the clock, the one figure turns the hour-glass, as an emblem of time, the other wields the sickle of death. Above each of the silver figures is a Latin verse; and in the middle of the plate is a simple, yet correctly mathematical representation of how the globular form of the earth is perceptible to the eye. Above, the minute-hand describes a circuit of 24 hours, each half of the dial-plate containing 12 hours; the day hours being marked with the image of the sun, and the hours of the night with the image of the moon. On the four corners of the dial-plate are engraved the four seasons of the year.

The third story also consists of four divisions, which project in the manner of a balcony. Round the centre of the lower division move the seven silver figures of heathen gods, in chariots; every deity makes its appearance once in seven days, exactly in front, where it remains for 24 hours, when it is relieved by the next; these godheads represent the seven days of the week.

In the centre of the second division is an image of the virgin, holding her son Jesus in her arms; two angels are seen placing crowns and garlands on her head; and during the performance of the bells, several angels make their appearance, making their obeisance before the image of Mary and the Savior.

Within the centre of the third division is a metal bell pending on a gilt plate of copper, on which is represented the judgment day. Round this metal plate move four silver figures, set in motion by mechanism, representing the four states of social life. These images point out the quarters of the hour, by striking the bell; the first quarter is represented

by a youth, the second by a grave citizen, the third by a Roman soldier, and the fourth by a priest.

In the fourth division is likewise a metal bell, on the sides of which there are chambers; on the left side is the representation of Death, proclaiming the hours of day and night by striking the bell; above it may be seen a Latin inscription, from Romans, vii. 23. To the right side is the image of the Savior, stepping forward, with the globe in his hand, and above it the cross. This figure proceeds every two minutes, in a slow manner, and then for a moment, hides itself from view; above it is a Latin verse, from the prophet Hosea, chapter xiii.

These two figures are of massive silver, behind the bell is inscribed the name of the artist, and the date 1589.

The whole is covered with copper, beautifully worked in filagree; on the extreme top is stationed a cock, which at the close of the chiming of the bells, spreads its wings, opens its beak, and crows; after which it resumes its former position.

On the side doors are painted and gilt figures of the Virtues, with flowers, obelisks, and other ornaments; and within are figures of the Fates. These exquisite figures are stated to have been engraved by the pupils.

This clock is also stated to have been made by Habrecht, for Pope Sixtus V.; and in many respects resembles the famous Strasburg clock.

THE HEAD-STONE.

THE coffin was let down to the bottom of the grave, the planks were removed from the heaped-up brink, the first rattling clods had struck their knell, their quick shovelling was over, and the long, broad, skilfully-cut pieces of turf were aptly joined together, and trimly laid by the beating-spade, so that the newest mound in the church-yard was scarcely distinguishable from those that were grown over by the undisturbed grass and daisies of a luxuriant spring. The burial was soon over; and the party, with one consenting motion, having uncovered their heads, in decent reverence of the place and occasion, were beginning to separate, and about to leave the church-yard.

Here some acquaintances, from distant parts of the parish, who had not had opportunity of addressing each other in the house that had belonged to the deceased, nor in the course of the few hundred yards that the little procession had to move over from his bed to his

grave, were shaking hands quietly but cheerfully, and inquiring after the welfare of each other's families. There, a small knot of neighbors were speaking, without exaggeration, of the respectable character the deceased had borne, and mentioning to one another little incidents of his life, some of them so remote as to be known only to the gray-headed persons of the group. While a few yards further removed from the spot, were standing together parties who discussed ordinary concerns, such as the state of the markets, the promise of the season, or change of tenants; but still with a sobriety of manner and voice that was insensibly produced by the influence of the simple ceremony now closed, by the quiet graves around, and the shadow of the spire, and gray walls of the house of God.

Two men yet stood together at the head of the grave with countenances of sincere, but unimpassioned grief. They were brothers, the only sons of him who had been buried. And there was something in their situation that naturally kept the eyes of many directed upon them, for a long time, and more intently than would have been the case, had there been nothing more observable about them than the common symptoms of a common sorrow. But these two brothers, who were now standing at the head of their father's grave, had for some years been totally estranged from each other, and the only words that had passed between them during all that time, had been uttered within a few days past, during the necessary preparations for the old man's funeral.

No deep and deadly quarrel was between these brothers, and neither of them could distinctly tell the cause of this unnatural estrangement. Perhaps dim jealousies of their father's favor—selfish thoughts that will sometimes force themselves into poor men's hearts, respecting temporal expectations—unaccommodating manners on both sides—taunting words that mean little when uttered, but which rankle and fester in remembrance—imagined opposition of interests, that, duly considered, would have been found one and the same—these, and many other causes, slight when single, but strong when rising up together in one baneful band, had gradually but fatally infected their hearts, till at last they who in youth had been seldom separate, and truly attached, now met at market, and, miserable to say, at church, with dark and averted faces like different clansmen during a feud.

Surely if anything could have softened their hearts toward each other, it must have been to stand silently, side by side, while the earth, stones, and clods, were falling down upon their father's coffin. And doubtless their hearts were so softened. But pride, though it can not prevent the holy affections of nature from

being felt, may prevent them from being shown; and these two brothers stood there together, determined not to let each other know the mutual tenderness that, in spite of them, was gushing up in their hearts, and teaching them the unconfessed folly and wickedness of their causeless quarrel.

A head-stone had been prepared, and a person came forward to plant it. The elder brother directed him how to place it—a plain stone, with a sand-glass, skull, and cross-bones, chiselled not rudely, and a few words inscribed. The younger brother regarded the operation with a troubled eye, and said, loud enough to be heard by several of the bystanders, "William, this was not kind in you: you should have told me of this. I loved my father as well as you could love him. You were the elder, and, it may be, the favorite son; but I had a right in nature to have joined you in ordering this head-stone, had I not?"

During these words the stone was sinking into the earth, and many persons who were on their way from the grave returned. For a while the elder brother said nothing, for he had a consciousness in his heart that he ought to have consulted his father's son in designing this last becoming mark of affection and respect to his memory; so the stone was planted in silence, and now stood erect, among the other unostentatious memorials of the humble dead.

The inscription merely gave the name and age of the deceased, and told that the stone had been erected "by his affectionate sons." The sight of these words seemed to soften the displeasure of the angry man, and he said, somewhat more mildly, "Yes, we were his affectionate sons, and since my name is on the stone, I am satisfied, brother. We have not drawn together kindly of late years, and perhaps never may; but I acknowledge and respect your worth, and here, before our own friends, and before the friends of our father, with my foot above his head, I express my willingness to be on other and better terms with you, and if we can not command love in our hearts, let us, at least, brother, bar out all unkindness."

The minister, who had attended the funeral, and had something intrusted to him to say publicly before he left the church-yard, now came forward and asked the elder brother, why he spake not regarding this matter. He saw there was something of a cold and sullen pride rising up in his heart, for not easily may any man hope to dismiss from the chamber of his heart even the vilest guest, if once cherished there. With a solemn and almost severe air, he looked upon the relenting man, and then, changing his countenance into serenity, said gently:—

"Behold how good a thing it is,
And how becoming well,
Together such as brethren are
In unity to dwell."

The time, the place, and this beautiful expression of a natural sentiment, quite overcame a heart, in which many kind, if not warm, affections dwelt; and the man thus appealed to bowed down his head and wept. "Give me your hand, brother;" and it was given, while a murmur of satisfaction arose from all present, and all hearts felt kindlier and more humanely toward each other.

As the brothers stood fervently, but composedly, grasping each other's hand, in the little hollow that lay between the grave of their mother, long since dead, and of their father, whose shroud was haply not yet still from the fall of dust to dust, the minister stood beside them with a pleasant countenance, and said, "I must fulfil the promise I made to your father on his death-bed. I must read to you a few words which his hand wrote at an hour when his tongue denied its office. I must not say that you did your duty to your old father; for did he not often beseech you, apart from one another, to be reconciled, for your own sakes as Christians, for his sake, and for the sake of the mother who bore you, and Stephen, who died that you might be born? When the palsy struck him for the last time, you were both absent, nor was it your fault that you were not beside the old man when he died.

"As long as sense continued with him here, did he think of you two, and of you two alone. Tears were in his eyes; I saw them there, and on his cheek, too, when no breath came from his lips. But of this no more. He died with this paper in his hand; and he made me know that I was to read it to you over his grave. I now obey him. 'My sons, if you will let my bones lie quiet in the grave, near the dust of your mother, depart not from my burial till, in the name of God and Christ, you promise to love one another as you used to do. Dear boys, receive my blessing.'"

Some turned their heads away to hide the tears that needed not to be hidden; and when the brothers had released each from a long and sobbing embrace, many went up to them, and in a single word or two, expressed their joy at this perfect reconciliation. The brothers themselves walked away from the churchyard, arm in arm with the minister to the manse. On the following sabbath, they were seen sitting with their families in the same pew, and it was observed, that they read together off the same Bible when the minister gave out the text, and that they sang together, taking hold of the psalm-book. The same psalm was sung (given out at their own re-

quest), of which one verse had been repeated at their father's grave; a larger sum than usual was on that sabbath found in the plate for the poor, for love and charity are sisters. And ever after, during both the peace and the troubles of this life, the heart of the brothers were as one, and in nothing were they divided.

NATURAL THEOLOGY.

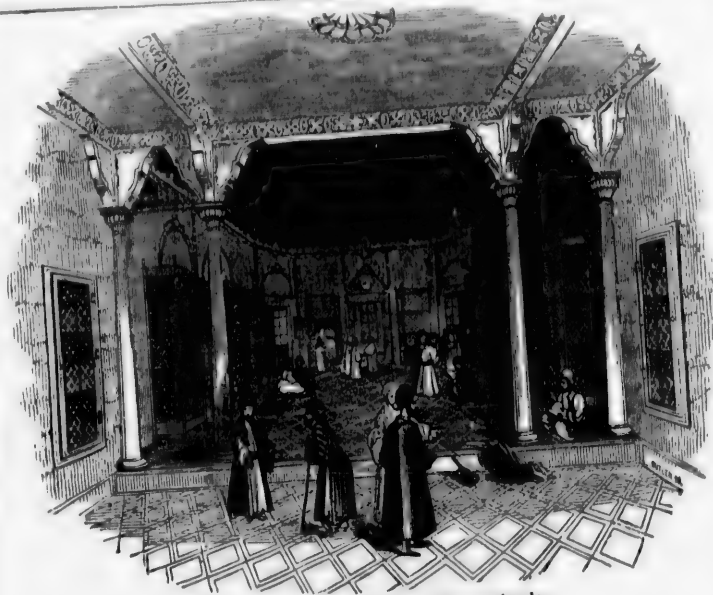
NATURAL theology tells of the creation of all things—of the mighty power that fashioned and that sustains the universe; of the exquisite skill that contrived the wings, and beak, and feet of insects invisible to the naked eye, and that lighted the lamp of day, and launched into space comets a thousand times larger than the earth, whirling a million of times swifter than a cannon-ball, and burning with a heat which a thousand centuries could not quench. It exceeds the bounds of material existence, and raises us from the creation to the Author of nature. Its office is not only to mark what things are, but for what purpose they were made by the infinite wisdom of an all-powerful Being, with whose existence and attributes its high prerogative is to bring us acquainted. . . . Persons of such lives as should make it extremely desirable to them that there was no God, and no future state, might very well, as philosophers, derive gratification from contemplating the truths of natural theology, and from following the chain of evidence by which these are established; and might, in such sublime meditation, find some solace to the pain which reflection upon the past, and fears of the future, are calculated to inflict upon them. But it is equally certain, that the science derives an interest incomparably greater from the consideration that we ourselves, who cultivate it, are most of all concerned in its truth—that our own highest destinies are involved in the results of the investigation. This indeed, makes it beyond all doubt the most interesting of the sciences, and sheds on the other branches of philosophy an interest beyond that which otherwise belongs to them; rendering them more attractive in proportion as they connect themselves with this grand branch of human knowledge, and are capable of being made subservient to its uses. See only in what contemplations the wisest of men end their most sublime inquiries! Mark where it is that a Newton finally reposes, after piercing the thickest veil that envelops nature—grasping and arresting in their course the most subtle of her elements, and the swiftest—traversing the regions of boundless space—exploring worlds

beyond the solar way—giving out the law which binds the universe in eternal order! He rests, as by an inevitable necessity, upon the contemplation of the great First Cause, and holds it his highest glory to have made the evidence of his existence, and the dispensations of his power, and of his wisdom, better understood by man. If such are the peculiar pleasures which appertain to this science, it seems to follow that those philosophers are mistaken who would restrict us to a very few demonstrations—to one or two instances of design—as sufficient proofs of the Deity's power and skill in the creation of the world. That one sufficient proof of this kind is in a certain sense enough, can not be denied; a single such proof overthrows the dogmas of the atheist, and dispels the doubts of the skeptic; but is it enough to the gratification of the contemplative mind? The great multiplication of proofs undeniably strengthen our positions; nor can we ever affirm respecting the theorems in a science not of necessary but of contingent truth, that the evidence is sufficiently cogent without variety and repetition. But, independently altogether of this consideration, the gratification is renewed by each instance of design which we are led to contemplate. Each is different from the other. Each step renews our delight. The finding that at every step we make in one science, and with one object in view, a new proof is added to those before possessed by another science, affords a perpetual source of new interest and fresh enjoyment. This would be true, if the science in question were one of an ordinary description. But when we consider what its nature is—how intimately connected with our highest concerns, how immediately and necessarily leading to the adoration of the supreme Being—can we doubt that the perpetually renewed proofs of his power, wisdom, and goodness, tend to fix and to transport the mind, by the constant nourishment thus afforded to feelings of pure and rational devotion? It is, in truth, an exercise at once intellectual and moral, in which the highest faculties of the understanding and the warmest feelings of the heart alike partake, and in which, not only without ceasing to be a philosopher, the student feels as a man, but in which, the more warmly his human feelings are excited, the more philosophically he handles the subject. What delight can be more elevating, more truly worthy of a rational creature's enjoyment, than to feel, wherever we tread the paths of scientific inquiry, new evidence springing up around our footsteps, new traces of Divine intelligence and power meeting our eye! We are never alone; at least, like the old Roman, we are never less alone than in our solitude. We

walk with the Deity; we commune with the Great First Cause, who sustains at every instant what the word of his power made. The delight is renewed at each step of our progress, though as far as evidence is concerned, we have long ago had proof enough. But that is no more a reason for ceasing to contemplate the subject, in its perpetually renovated and varied forms, than it would be a reason for resting satisfied with once seeing a long-lost friend, that his existence had been sufficiently proved by one interview. Thus, instead of restricting ourselves to the proofs alone required to refute atheism, or remove skepticism, we should covet the indefinite multiplication of evidences of design and skill in the universe, as subservient in a threefold way to purposes of use and gratification: *First*, as strengthening the foundation whereupon the system reposes; *secondly*, as conducive to the ordinary purposes of scientific gratification, each instance being a fresh renewal of that kind of enjoyment; and *thirdly*, as giving additional ground for devout, pleasing, and wholesome adoration of the Great First Cause, who made and who sustains all nature.

LIBRARIES AT CONSTANTINOPLE.

"It is a ridiculous notion which prevails among us," said Sir William Jones, many years ago, "that ignorance is a principle of the Mohammedan religion, and that the Koran instructs the Turks not to be instructed." There is little question that even now we are too much accustomed to regard the followers of that faith as necessarily rude and ignorant beings, men who will neither cultivate learning themselves, nor allow others to do so; there is still less question that the articles of their creed afford us no ground for such an impression. Mohammed not only permitted, but advised his people to apply themselves to the acquisition of knowledge; "Seek learning," he tells them, in one of his precepts, "though it were in China." The high estimation, indeed, in which he held it, is abundantly shown in his extravagant declaration, that "the ink of the learned, and the blood of martyrs, are of equal value in the sight of Heaven." Nevertheless, it must be confessed, that at the present day there is no Mohammedan people remarkable for proficiency in literature or science; the existing race of Turks, who afford us the readiest specimen of a Moslem nation, are a set of barbarians, as proud as they are ignorant. The early sultans, as well as their predecessors, the Saracen califs, were the zealous patrons of knowledge; "Be



Interior of the Public Library at Constantinople.

the support of the faith, and the protector of the sciences," was the dying injunction of the first Osman to his successor Orkan, in the beginning of the fourteenth century. The later sovereigns of the Turkish empire have been less zealous in the cause of learning; it is possible, that as the fanaticism of their subjects has abated, the monarchs have become unwilling to remove their ignorance, lest the consequences should be detrimental to both the spiritual and the temporal despotism which afflict their country.

One of the modes in which the early sovereigns of Turkey have testified to posterity their regard for letters, is the establishment of *Kitab-Khans*, or public libraries, in the great cities of their empire, either in connexion with the mosques and colleges, or apart as distinct institutions. Constantinople possesses thirty-five, none of them containing less than one thousand manuscripts, and some more than five thousand.

Our readers may acquire a good idea of the internal appearance of one of these libraries, from our engraving. Each volume is bound in colored leather (red, green, or black), and is enclosed in a case of similar material, which protects it from the dust, and from the worms. The title of the work, instead of being written,

as with us, upon the back of the book, is marked first upon the edges of the leaves, and then again on the edge of the outer covering. Cases, with glass or wire-work fronts, are ranged along the walls of the library, or in its four corners; and in those the volumes are deposited, resting on their sides, one above another.

These libraries are open on every day of the week, except Tuesday and Friday; visitors are allowed to read any books, to make extracts from them, and even to transcribe a whole manuscript. The subjects of the greater part of the works, are, of course, analogous to the usual studies which are followed in the colleges, or *medressés*; and as law and theology alone occupy the attention of the students, the mass of books consists of copies of the Koran, and commentaries upon it, with collections of the oral laws of Mohammed, and works on jurisprudence. The manuscripts are all written on the finest vellum, and some of them afford beautiful specimens of penmanship; each library has a catalogue. Most of these different collections are continually being augmented by the produce of the surplus funds arising from their original endowments, and also by the liberal contributions of private individuals. The scribe who writes

a fine hand, generally regards it as a duty to make a transcript of the Koran at some period of his life, and bestow the copy upon one of the Kitab-Khanés. Notwithstanding the necessary dearth of books where printing is not practised, every citizen takes care to acquire a certain number in the course of his life; and the lawyer, the statesman, or the man of letters, who possesses a fine library, bequeaths it to some public library, that he may receive the benedictions of those who avail themselves of his liberality.

FRANKNESS AND RESERVE.

To strike a proper medium between imprudent openness of communication and forbidding reserve, is an attainment which will be found of consequence in our progress through life. While an open ingenuous disposition is naturally most attractive, it is, when carried to an extreme, attended with many serious evils; and, on the other hand, while a person characterized by great caution in his conversation avoids the foolish disclosures of the former, he is in danger, if he maintain too close a reserve, of thereby repelling the friendly feelings which depend on mutual knowledge, and consequent sympathy. But before attempting to point out the course to be pursued in order to steer clear of both these extremes, it may be as well to delineate a few varieties in each class; for while the general effect may be the same, the causes which lead to it are often very different.

There are first, then, the constitutionally reserved—those whose natural disposition it is to withdraw, like the snail, within its shell, from the gaze of the multitude, the tendency of their minds being to restrain the outward expression of their views and feelings.

Then there are the reserved from considerations suggested by prudence. Having frequently seen mischievous consequences flowing from making those with whom we come in contact the repositories of our information, they put a guard upon their lips, lest they should be led, by too great freedom of intercourse, into some awkward and unpleasant predicament. However necessary prudence in this respect may be, persons of this class sometimes carry their caution to a ridiculous extent. So guarded is their correspondence with all around them, that one would imagine they believed themselves surrounded by persons resembling the emissaries of the famous or rather infamous Fouché, ready to seize on every word and drag them into judgment on account of it. Such persons seem to move

in an atmosphere of mystery; they scarcely know what they do themselves, far less how others are engaged. A decided remark upon character or events never falls from their lips; the farthest length they are ever known to go, and even that is a stretch, is to mention that they had heard so and so—however, it was but a rumor, merely a floating report, as likely to be false as true. With such persons, the reply "I don't know," is an impenetrableegis, repelling every curious inquiry. To judge from their conversation, they turn the contingency of the past into certainty and adopt as their motto, "Since ignorance is bliss, 'tis folly to be wise."

A third class we find characterized by dignified reserve. A number of those little incidents and events which possess interest in the estimation of others, are passed over by them as unworthy of notice; they look with a feeling bordering on contempt upon the trifles which, judging from the conversation in vogue, seem to occupy the attention of others. Their taste becomes gradually more fastidious, and as they find it impossible to introduce important and serious subjects at every season, and in all companies, the consequence is, that they learn to retire into the sanctuary of their own thoughts for entertainment.

Then, again, there are the consequentially reserved. The reserve of this class is to be understood with limitations; it rather consists in the withholding sources of information than of the information itself. To say, "I read so-and-so in the newspapers," or "such a person told me this," would in their estimation be an unpardonable lowering of their consequence. Such phrases as "I understand," or "I am told," convey a far grander and more indefinite idea to their hearers, of their knowledge of men and things.

Reserve, however, may very often proceed from principle—from a rigid determination to say nothing but what is well authenticated, and which will not prove injurious to the character of any one; and although such a determination shuts up numerous subjects respecting which perfect freedom of intercourse may be enjoyed, it also prevents the person acting upon it from indulging in that kind of conversation in which it is most dangerous to throw off reserve.

The causes leading to freedom of communication are as various as those leading to the opposite. There is a constitutional frankness, as well as a constitutional reserve—with some it is as natural to communicate as with others to refrain from communicating. The first of this class may be denominated the benevolently frank. These take a philanthropic pleasure in entertaining and interesting those with whom they meet, and, in order to effect this end,

they make all the stock of information which they themselves possess a common good, transferable at any time for the public benefit. Such persons most assiduously set themselves to minister to the gratification of their companions. If the reply to the question "Have you heard so-and-so?" be in the negative, they with the utmost delight proceed to give a full, true, and particular account of the whole matter, thinking themselves abundantly recompensed for their trouble by the pleasure which they thus confer.

As there are the consequentially reserved, so there are also the consequentially unreserved. If you trust a secret to one of the latter, depend upon it, it will not long remain so. The pleasure of showing that he has been thus distinguished in the multitude, overpowers a sense of how the secret is communicated to a third person, accompanied with strict injunctions that it should go no further, conveyed perhaps in such terms as the following: "Now, I expect I can't go beyond these walls, and I tell you keeping that it will be perfectly safe." An example is always better than precept, and readily being conceived, that however valuable this reasoning may be to its author, it will not exert a very great influence on those on whose conduct it is intended to sway.

Another grade of this class are those individuals who speak freely of themselves, their opinions, their doings, their sentiments; but all this is done from motives of vanity, in order to place themselves in as favorable a light as possible.

These various causes of the two dispositions which form the subject of this article, although distinct in theory, are generally found blended more or less together in actual life, sometimes one preponderating and sometimes another. In regard to whether it is best to cultivate the one or the other, it will be found that the path of safety lies in the middle; the extremes on either side being dangerous.

The person who keeps his sentiments, joys, and sorrows, to himself, will soon find himself as isolated from the sympathy of his fellow-creatures as Robinson Crusoe was in his desert island, having placed himself voluntarily in that forlorn situation, to which Defoe's hero was forced by adverse circumstances. He thus deprives himself of that interchange of feeling which enhances the joy of prosperity, and soothes and sustains the mind in adversity; for the Creator has appointed the disclosure of our feelings to those who can sympathize with them, as a kind of safety-valve, in those times of extreme emotion when the heart would break if not thus relieved.

While an individual of a too-reserved character thus deprives himself of the benefit and

happiness arising from social interchange of feeling, one of a completely opposite character is thereby exposed to evils which, though of a different nature, are by no means less to be avoided. Such a person often errs with regard to those whom he makes his confidants—newly-formed friends, casual acquaintances, or even perfect strangers, receive communications fit only for the ear of intimate friends, on whose prudence reliance may be placed. Certainly, none need feel themselves distinguished by the confidence of such persons, which is freely bestowed on any with whom they may happen to come in contact. Those of this character err also in regard to the subjects on which they speak. Details respecting personal and family matters, which a right thinking and prudent person would shrink from allowing to pass beyond the circle in which they occurred, are made known to those whose only interest in them is the gratification of their curiosity, and being furnished with the means of communicating to others what was so thoughtlessly made known to them. And it were comparatively well if an individual of this disposition restricted himself to his own affairs; but it seldom happens that this is the case. He who exposes his own concerns to the public is not likely to be very chary about those of others, and rash judgments in regard to character and exaggerated or ill-authenticated reports of matters are thrown about, as if the individual were utterly careless of the injuries which giving currency to such statements may inflict on those who are the subjects of them. Many have had great reason to repent of such unreserved and imprudent, not to say sinful communications.

But it may be said here, that it is far easier to see the evils on both sides, than to hit the exact medium between unsociableness on the one hand and imprudence on the other. So it is; but still to reach this is a point of some importance in the minor morals of life, and it is worth while to make an effort to do so.

To gain this object we should use discrimination, both in regard to whom we speak, and what we speak about. In reference to the first of these, our communications, especially in as far as they relate to personal feelings or history, should grow more and more reserved as the circle widens, for there are many things which it would be quite proper for an individual to speak freely of in his own family, which it would be manifestly imprudent to talk of in the same manner to mere acquaintances or strangers; for while in the one case such openness tends to strengthen affection, in the other it may only furnish an aliment to the curious, or, as sometimes happens, weapons to the designing.

In regard to what we speak of, we should

be careful to say nothing, either directly or indirectly, for the mere purpose of showing off ourselves, our amiable character, our knowledge, our connexions, and the like; and if we are tempted to introduce subjects for any such purpose, we should immediately check ourselves, remembering the counsel of the wise man—"Let another praise thee, and not thine own lips."

Again, in all our communications, we ought to have a strict regard to character; putting out of view altogether a worse motive, we ought never, for the mere purpose of having something interesting to say, thoughtlessly make statements injurious to the character of others. On the other hand, we ought to avoid making a mystery of trifles, and of those things, the communication of which, while it may gratify others, can neither injure ourselves nor them.

Free and unreserved communication of thought and feeling, is at once the cement and charm of domestic life; but there is a vast variety of topics of general interest, which may furnish us with subjects of both useful and interesting conversation, in the other circles in which we may move, and thus preserve inviolable those matters, the publishing of which often manifests both imprudence and vanity.

THE SECRET OF SUCCESS.

THERE are some men who appear born to good fortune, and others whose destiny seems to subject them to eternal failure and disaster. The ancients represented Fortune as a blind goddess, because she distributed her gifts without discrimination; and in more modern times, the belief has been prevalent that the fortunes of a man were ruled chiefly by the planet under which he was born. These superstitions, however ridiculous, show at least that the connexion between merit and success is not very conspicuous, yet it is not therefore the less perpetual. To succeed in the world, is of itself a proof of merit; of a vulgar kind, indeed it may be, but a useful kind notwithstanding. We grant, indeed, that those qualities of mind which make a man succeed in life, are, to a great extent, subversive of genius. Nevertheless, numerous illustrious examples might be given of men of the highest genius being as worldly-wise as duller mortals. It is the pretenders to genius, rather than the possessor of it, who claim the largest exemption from those rules of prudence which regulate the conduct of ordinary mortals, and array themselves in the deformities of genius,

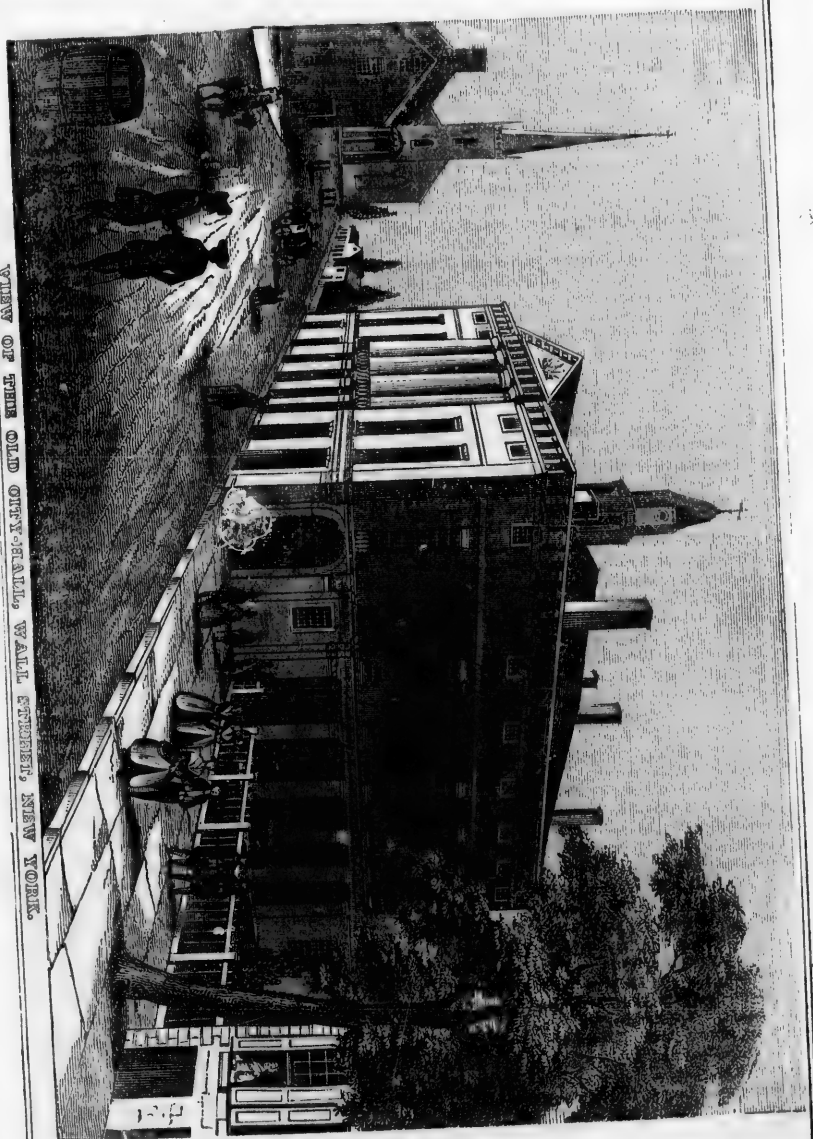
in the idea that they constitute its beauties. There are some indiscretions, we believe, to which men of a vigorous fancy and keen sensibility are naturally heir, and for which it would be unjust to condemn them with vigor, as it would be to blame one of the cold-blooded sons of discretion for being destitute of poetic fire. Yet every deviation from prudence is a fault, and not to be imitated, though it may sometimes be excused.

The most important element of success is economy: economy of money and of time. By economy we do not mean penuriousness, but merely such wholesome thrift as will discipline us to spend our time or money without an adequate return in either gain or enjoyment. An economical application of time brings leisure and method, and enables us to drive our business, instead of our business driving us. There is nothing attended with results so disastrous, as such a miscalculation of our time and means, and will involve us in perpetual hurry and difficulty. The brightest talents must be ineffective under such a pressure, and a life of experiments has no end but penury. Our recipe for succeeding in the world, then, is this: "Work much and spend little." If this advice is followed, success must come—unless, indeed, some unwise adventure, or some accident against which no human foresight could provide, such as sickness, conflagration, or other visitations of Providence, should arrest the progress onward; but, in the ordinary course of human affairs, success will ever wait upon economy, which is the condition by which property must be earned. Worldly success, however, though universally coveted, can only be desirable in so far as it will contribute to happiness, and it will contribute to happiness very little, unless there be cultivated a lively benevolence toward every animated being. "Happiness," it has been finely observed, "is the proportion of the number of things we love, and the number of things that love us." To this sentiment we most cordially subscribe, and we should wish to see it written on the tablet of every heart, and producing its fruits of charity. The man, whatever be his fame, or fortune, or intelligence, who can treat lightly another's woe, who is not bound to his fellow-men by the magic tie of sympathy, deserves, ay, and will obtain, the contempt of human kind. Upon him all the gifts of fortune are thrown away. Happiness he has none; his life is a dream; a mere lethargy, without a throb of human emotion, and he will descend to the grave, "unwept, unhonored, and unsung." Such a fate is not to be envied, and let those who are intent upon success, remember that success is nothing without happiness.

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VIEW OF THE OLD CITY-HALL, WALL STREET, NEW YORK.



THE OLD CITY-HALL, NEW YORK.

THE old city-hall in Wall street, at the head of Broad street, has been faithfully copied from an engraving published by Tiebout, in 1789. It had been a short time previously enlarged and improved for the reception and accommodation of the first congress convened under the new constitution of the United States. In compiling the annexed succinct history of its predecessors, we have drawn largely from the original records of the common council.

The first stadthouse was erected by the Dutch, while in possession of the colony of New Netherlands and the city of New Amsterdam, under the jurisdiction of a schout, burgmaster, and schepen.

Hudson came up to the island of Manhattan, called by the natives *Manndoes*, in the month of October, 1609, then occupied by a ferocious tribe of Indians: he navigated as high as Albany, and on his return to Holland, transferred his right of discovery to the Dutch, who afterward granted it to their West India company. The latter the next year sent ships to Manhattan to trade with the natives. In 1614, a fort was built by the Dutch at the southwest extremity of the island, and also another, called Fort Aurania (Orange), where Albany now stands, which was settled before the city of New Amsterdam; the latter probably was not permanently occupied until the year 1619. From this period, it remained in possession of the Dutch until the conquest of the colony by the English, in 1664. A few years after, it was granted by Charles II. to his brother James, duke of York and Albany; and the two principal, indeed only cities at that time in the colony, were called after him, New York and Albany.

The date of the erection of the stadthouse is not ascertained, but most likely it was shortly after the settlement of New Amsterdam. It was, as were most of the houses of that period, built of bricks, called *clinkers*, imported from Holland, as ballast for merchant-vessels. Few specimens of these early structures now remain here, but several yet exist in Albany. The style of architecture, with steep, tiled roofs, gables to the streets, and alleys between the houses, was Spanish, introduced by that nation into Flanders, now Belgium, while that populous portion of the Netherlands was possessed by Spain. In consequence of the long-protracted civil and religious wars between Spain and Holland, which terminated in the independence of the latter, a most rancorous antipathy existed on the part of the Dutch of New Netherlands against the Spaniards, which was scarcely obliterated from the minds of their descend-

ants until the American revolution. Evidence of this fact is to be seen in the history of the famous negro plot in 1741, when the absurd idea was propagated and believed, that it was instigated by the Spaniards of South America. Indeed, the predatory wars of the English against Spanish America, privateering and buccaneering, fostered this early prejudice. To kill or plunder a Spaniard, was regarded neither robbery nor murder. What dreadful principles to cherish in a civilized nation!

About the year 1695, the stadthouse began to require repairs, adequate to render it safe for the meetings of the court of common council, and of the supreme court. After several surveys and profound deliberations, the *Hogen Mogens* of the day determined that it was most expedient, as well as economical, to build a new city-hall, at the head of Broad street, and to lease or sell the old one. No lessee offering, it was sold at auction to Mr. John Rodman, merchant, for nine hundred and twenty pounds, equal to two thousand three hundred dollars. Three thousand pounds, or seven thousand five hundred dollars, were appropriated toward building the new city-hall: a large sum in those days to be raised by direct tax on a population not exceeding five thousand.

The stadthouse, or first city-hall, was situated in Dock, now Pearl street, at the corner of Coenties (Countesses') lane.

The site of the new city-hall was laid on a bastion and line of stone fortifications that extended across the northern boundary of the city, from the East to Hudson river, whence the name of *Wall street* is derived. This appears by a petition of the corporation to Lieutenant-Governor Hanfen and his majesty's council, to intercede with the earl of Bellamont, the governor, then absent at Boston, for permission, as the fortifications were dilapidated, to make use of the stones for building a new city-hall, which, no doubt, was granted. No ceremony appears to have taken place on laying the foundation, which was, probably, in the spring of 1700; and the common council held its first meetings there in the summer of 1703. This edifice, for a long time the most magnificent in the city, was frequently improved and embellished, until the revolutionary war. While in possession of the British, it was occupied for the main-guard, and escaping the ravages of the enemy, it remained entire, although much injured, until the evacuation of the city by the British forces, on the 25th of November, 1783.

A room was appropriated in the hall for the use of the New York Society Library, founded in 1754, whose collection of books, though not extensive, was select and valuable, and was totally plundered by the British.

The present library was renewed in 1789. A chamber also contained a large stand of arms and equipments, purchased by the corporation in 1764, which were seized by the whigs on the Sunday afternoon, when the news of the battle of Lexington, 19th of April, 1775, arrived, and threw the city into the utmost consternation. The chief persons concerned in the seizure, viz., Colonel Isaac Sears, Col. John Lamb, McDougall, Willett, and others, were the "Liberty Boys," so called, who immediately assembled in Van Dyck's ball-alley, northeast corner of Broadway and John street, and formed a company which patrolled the city to prevent any disturbances—their parole was *Boston*, counter-sign *Lexington*. This was the first resort to arms in the province of New York.

No city or state in the Union suffered in proportion to New York—a frontier at both extremities; exposed on the north to the predatory incursions of the Canadians and Indians, while its capital at the south was nearly one fifth desolated by the awful conflagration on the 21st of September, 1776, shortly after its occupation by the British, who kept possession until the peace of 1783. At the evacuation, on the 25th of November, the patriot families returned, after a tedious and distressing exile of seven long years, to mourn over their homes, devastated or in ruins—their fortunes reduced by depreciated currency, with little remaining to re-establish themselves in the enjoyment of their former plain, but redundant comforts. Their descendants of the present day and the enterprising inhabitants of this commercial emporium of the ocean and the lakes, can but feebly estimate the privations and sufferings of the

* THE "SONS OF LIBERTY."—The success of that great struggle for liberty, the American Revolution, which was by the many supposed hopeless, and which present historians deem almost miraculous, was brought about by the courage and perseverance of a few indomitable spirits, whom no labor could weary or danger appal; and it was by their moral courage, perseverance, and intrepidity, that this great Revolution was begun, continued, and ended. In the year 1765, Colonel Isaac Sears, afterward better known by the name of "King Sears," a man of great personal intrepidity, forward in dangerous enterprises, and ready at all times to carry out the boldest measures, became the originator and leader of the patriotic band, who associated themselves together under the name of the "Sons of Liberty." Their organization soon pervaded every part of the colonies, and was the germ of the Revolution. By their intrepidity the spirit of the masses was aroused, and by their persevering efforts to enslave them. These excited to oppose the nucleus of the future armies of the Revolution; and it is to the moral courage which they displayed, and the indomitable resolution with which they braved all danger, that the world is indebted for the illustrious example set by the infant colonies to Europe, and the foundation of a great and glorious republic.

anti-revolutionary families, whose survivors may, say, as Augustus did of Rome, we found our city in brick, and leave it in marble. May they never lose sight of the plain, simple frugality and virtues of those progenitors whose word was their bond, and whose morals were irreproachable.

In the fall of 1784, the revolutionary congress removed to this city, and the court-room in the city-hall was fitted for their use. On the adoption of the new constitution, more extensive accommodations were required for the senate and house of representatives about to convene in the city, for which purpose the old edifice was entirely renovated, and an extensive addition made in the rear. The senate-chamber was in the former, and that for the house of representatives in the latter. The expenses of these extensive improvements were defrayed by lottery. Maj. L'Enfant, a French engineer, of great abilities, in the service of the United States during the war, was the architect, and his skill and taste displayed in this edifice were universally admired, and gave the chief spring to a more improved style of architecture in public buildings throughout the United States.

In the spring of 1789, the first congress under the new constitution assembled in this city, and met in the new edifice. On the 30th of April, George Washington was inaugurated the first president, in the gallery in front of the senate chamber, in view of an immense concourse of citizens collected in Broad street—the doors, windows, and roof of every house were thronged with exulting spectators. The oath of office was administered by Chancellor Livingston, on a superb quarto bible, then belonging to the grand lodge of the state of New York, which is carefully preserved by St. John's lodge, No. 1, having the following inscription imprinted in gold letters on its cover, of an event so auspicious to the prosperity and happiness of the United States:—

"On this sacred volume, on the thirtieth day of April, A. M. 5789, in the city of New York, was administered to George Washington, the first president of the United States of America, the oath to support the constitution of the United States. This important ceremony was performed by the most worshipful grand-master of free and accepted masons of the state of New York, the Honorable Robert R. Livingston, chancellor of the state.

"Fame stretched her wings, and with her trumpet blew,

"Great Washington is near—what praise is due?

"What title shall he have? She paused—and said,

"Not one—his name alone strikes every title dead."

The standard belonging to the second regiment of New York state artillery held near

the president on the occasion, is still in possession of the corporation of the city, which presented another elegant stand of colors to the regiment in exchange. May the bible and standard be preserved and transmitted to future generations, as proud memorials of this important epoch in our national history.

This edifice, becoming superannuated, requiring constant and expensive repairs, and, moreover, not conveniently adapted for the increasing courts and municipal offices, was, after the building of the third, present marble city-hall, at the head of the Park, the pride of the city and admiration of every visiter, demolished in 1812, and the site laid out in lots and sold to private individuals. The United States afterward purchased buildings upon the site for a customhouse, which in its turn became too confined and inconvenient for the immensely growing commercial operations of the city, and has been replaced by the present splendid and more commodious structure.

LINDLEY MURRAY.

LINDLEY MURRAY, the "prince of English grammarians," was an American. He was born in the memorable year 1745, at Swetara, near Lancaster, in the state of Pennsylvania. His father was an active and enterprising person, very anxious to improve his circumstances, and to raise his family to independence. While he was following the occupation of a miller, he thought of devoting his attention to some other branch of business, and began trading to the West Indies, to which he made several successful voyages. Latterly, he became an extensive ship-owner, and engaged in a great variety of mercantile pursuits, by which he amassed a considerable fortune.

To his mother, an amiable and clever woman, young Murray owed much, and he was sensible of it. He held her in great esteem, and cherished toward her the feelings of a most affectionate and devoted son. Both his parents were members of the society of friends, and they were pious and exemplary persons. The Bible was read daily in the family; and one of the first things which made a strong impression on his mind was seeing his father shedding tears as he sat in a corner of the room, perusing by himself the sacred page. This may appear to some a trifling incident; but such was its influence upon the mind of Lindley Murray that he continued to refer to it with gratitude and gladness to the end of his days.

Lindley was the eldest of twelve children. In his infancy he was very delicate. He was

playful and frolicsome, however; and, being weak and sickly, he was greatly indulged, especially by his grandmother, who lived in the family. Indeed, he was, in every sense of the term, a "spoiled child;" and, as was to be expected, became very peevish and obstinate. He was full of mischief and tricks, some of which indicated anything but an amiable disposition. As he was not corrected, he became so forward and ungovernable that it was found necessary to remove him from the observation of his indulgent grandmother, and place him under the care of an aunt. She was a woman of great kindness, as well as firmness of character; and it was not long till the wayward, mischievous boy found that he was under a very different kind of training from that to which he had formerly been subjected. To this discreet and excellent relative he was much indebted; and in after-life he frequently confessed that to her wise and salutary management he owed in a great measure his future eminence.

When about seven years of age, he was sent to the city of Philadelphia, that he might have the benefit of a better education than could be had at Swetara. But he was not long at the academy of Philadelphia till he removed with his parents to North Carolina. Their residence there was temporary, and in 1753 they settled at New York. Lindley was sent to one of the best seminaries in the city, and every attention was paid to his education by his parents and teacher. Notwithstanding his fondness for play, he scarcely ever neglected to perform the tasks which were prescribed to him, and he did so to the satisfaction of his teacher. He made great progress in his education, and gained a reputation for talent and scholarship.

From school, young Murray was removed at a very early age to the counting-house of his father, who was most desirous that his son should follow the mercantile profession, though all his efforts and solicitations to this effect failed; Lindley had no relish for it, and would be anything but a merchant. His father persevered in his purpose. He was a severe disciplinarian, and went the length of compelling him to enter on an employment which was most uncongenial to his wishes. This, together with certain family regulations, appeared to him so unreasonable that he resolved to withdraw from the counting-house and the parental roof, and begin the world for himself. After having received a severe chastisement from his father, he packed up his books and any little property he possessed, and set out for a town in the interior of the country, where there was an excellent seminary. Being respectably connected, he was received into the establishment as a boarder.

While here he prosecuted his studies with great ardor, and would have been perfectly happy but for the sorrow which he thought his absence would occasion his mother. That absence, however, was of short duration. He had a particular friend at Philadelphia, a youth about his own age, to whom he paid a visit. When about to leave the city, he met a gentleman who had dined at his father's a short time before, who asked him how long he expected to remain. He said he was "just setting off." The gentleman had just been with a letter to the postoffice, but was too late; and it being about business of great importance, he requested him to deliver it with his own hand as soon as he arrived at New York. Young Murray was taken by surprise; he could not muster sufficient courage to state to him his situation, and took charge of the letter. At first he thought of putting it into the postoffice; but having engaged to deliver it personally, he could not think of breaking his word. He hurried on to New York, and delivered the letter, expecting to return immediately; but the boat which crossed the bay did not sail till next morning, and he had to remain over the night. Though he had conducted his business with great caution, he was perceived by some person who knew him.

An uncle visited him, who urged him strongly to go home, telling him at the same time of the distress of his mother on his account. After some remonstrance he agreed to call upon her; she received him affectionately; and during the interview his father came in. He saluted him tenderly, expressed great satisfaction at seeing him again, and they spent the evening together in great harmony and affection. A person was despatched next day to the place of his retreat, to settle all accounts and bring back his property; thus the boy's folly was happily terminated, and his father's fireside was dearer to him than ever. Till his death he referred with sorrow to the folly of which he was guilty in leaving his home, and likewise with gratitude to the manner in which he was brought back. In one of his letters he says—"When I reflect on this rash and imprudent adventure—on the miseries in which it might have involved me—and on the singular manner in which I was restored to the bosom of my family—I can not avoid seeing the hand of Divine Providence in my preservation, and feeling that I ought to be humbly and deeply thankful for the gracious interposition."

Shortly after his return to New York, he solicited the privilege of a private tutor to aid him in his studies, with which request his father kindly complied. The gentleman appointed was learned, and talented, and most attentive to his charge. Lindley commenced

and prosecuted his studies with diligence and alacrity. He rose early, and sat up late. This close application, however, proved too much for a constitution naturally delicate; the incessant study and confinement injured his health, and he was obliged for a time to abate the ardor of his pursuits, and to join bodily exercise with mental application.

When under the superintendence of this learned and faithful preceptor, he was very gay and frolicsome, and was led it appears "into many follies and transgressions." But he had a high veneration for those who were truly religious, and for all books that inculcated morality and virtue. Even at this period, though not decidedly the subject of religious impressions, he had a great esteem for Christianity. Some of his intimate acquaintances were skeptics and deists; but all the arguments which they advanced, and all the infidel publications which they put into his hands, never disturbed his mind or led him to doubt the divine origin of the Christian religion.

When between seventeen and eighteen years of age, he became so attached to literary pursuits that the counting-house had no charms for him. To follow his father's business—to be a merchant—he would not consent; it seemed to him a most uninteresting and unintellectual employment. He communicated his wishes to his father, and expressed his intention to follow the legal profession; but his proposal was strongly objected to. His father reminded him of its temptations—of the small return it would yield him compared with what he would receive if he became a merchant—and the anxiety he felt that he should assist him in his mercantile pursuits; but all argument and persuasion failed; he was determined to follow a literary profession, though, in his father's estimation, it was neither so lucrative nor so honorable as that of a merchant.

The office in which Murray was placed to acquire a knowledge of the law was one of the best which could be had in the city of New York. The principal was Benjamin Rissam, Esq., an intimate friend of his father, a man of great integrity and eminence in his profession. John Jay, Esq., afterward governor of New York, was his fellow-student—a young man who then gave indications of talent and excellence. With these advantages he prosecuted his studies with zeal and alacrity, and at the close of the fourth year he was called to the bar, and received license to practise as both counsel and attorney, according to the custom of that time. His success exceeded his expectations; and at the age of twenty-two he married "a young woman of personal attractions, good sense, a most amiable disposition, and of a worthy and respectable family."

Shortly after his marriage his father's business required him to go to England, and to remain for a time in that country. Circumstances connected with his own profession rendered it necessary for him to go there likewise. In 1771 they returned to New York, where he resumed the practice of the law. He was exceedingly attentive and laborious, and was generally esteemed for his professional knowledge, as well as his private worth. He never encouraged litigation, even when he saw it to be for his own pecuniary advantage. He uniformly recommended a settlement of differences by arbitration, and never, in the whole course of his practice, did he undertake a case about the justice of which he had a doubt, or advocate the claims of an individual which he thought unreasonable. He gained for himself the reputation of an "honest lawyer;" and in consequence of his integrity as well as his ability he acquired great celebrity, and enjoyed for many years great success.

But "there is a tide in the affairs of men;" like others he had only his day. About this time the troubles in the colonies commenced, which were followed by a general failure of proceedings in the law courts of this country. This circumstance, together with a severe illness which impaired his health, induced him to relinquish the profession of the law, and retire for a time into the country. He went to Islip in Long Island, about forty miles from New York, where he remained four years. They were the idlest and most unprofitable years of his life; and to his death he spoke of them with regret, and with unqualified condemnation. He then returned to New York, and began business as a merchant. His father gave him unlimited credit in the importation of goods from England; and by perseverance and a great command of capital he succeeded beyond his most sanguine expectations. He became every year more prosperous; and about the time when the question of American independence was settled he retired from business, and purchased a delightful country-seat, about three miles from the city, where he expected to pass the remainder of his days. But how soon are our hopes blasted! Before he could leave New York and settle at Bellevue (the name of his new abode), he was seized with a most alarming illness, which left him in a very infirm and debilitated state. As soon as his health would permit, he repaired to the spot where, to use his own words, "he promised himself every enjoyment which his heart desired." But the fine mansion, and the noble river on which it stood, and "the pleasant country on the opposite shore," and the elegant furniture, and the beautiful garden, and the verdant lawns on which the cattle grazed, yielded him but

little comfort. His health declined, every year he felt himself weaker, and his friends and himself feared that death would soon terminate his earthly existence. To remove, if possible, his complaint, and to restore his health, he was recommended to try a change of scene, and to leave for a time his delightful retreat. He went first to Bristol in Pennsylvania, then to the celebrated mineral springs in the mountains of New Jersey, and latterly to Bethlehem, a town about fifty miles from Philadelphia. But he was little benefited by all these wanderings; and his father who accompanied him, having been seized with sudden and severe indisposition, they instantly bent their course homeward.

Though Mr. Murray's health was not much improved by his summer's excursion, it was not altogether fruitless in good. He found that he was generally best when the weather was cold, that Bellevue was too secluded, and that the atmosphere was not sufficiently bracing. In these circumstances he was advised by his physicians to try the effect of a change of climate; and Yorkshire, in England, was fixed upon as the place of his retreat. Having made certain arrangements, he embarked with his wife in the close of the year 1784, and reached that country in safety. When he left America, he thought it would only be for a short season, and that he would soon return to his own country and spend the remainder of his days with his early friends. Two years was the utmost he had assigned for his absence. But how short-sighted is man, and how very little does he know of the future! He never was able to return. His health was never restored; indeed, he never left the village in Yorkshire which he fixed upon as a temporary residence. He lived there an invalid for the long period of forty-two years.

It was not till the period of his residence in England that he became an author. Though he was confined to the house almost the whole of that time by bodily indisposition, his mind was active and vigorous. To prevent that tedium and irritability which bodily infirmity generally occasions, and also with the view of being useful to others, he wrote and published a work entitled, "The Power of Religion on the Mind." It appeared anonymously, and his object in publishing it was purely benevolent. He distributed five hundred copies *gratis* among the inhabitants of York and its vicinity. The publication was well received; when it reached the sixth edition, he enlarged the work and put his name to it. After this he disposed of the copyright without any pecuniary recompense to an influential bookseller in London, and under his auspices it gained an extensive circulation. As he

never contemplated any pecuniary advantage by the publication, but simply the benefit of others, it was peculiarly gratifying to him to receive from various quarters testimonies of approbation and assurances of the advantage which had been derived from its perusal. This was to him the source of great delight. Often did he express his thankfulness to the Author of his being that "he had been the instrument, even in a small degree, of disseminating excitements to a pious and virtuous course of life."

His second publication was his "Grammar of the English Language." This work, which has gained such celebrity, was completed in less than a year. It was commenced in the spring of 1794, and published in the spring of 1795. He was induced to write it by some of his friends, who had established a school for young females in York. The first teachers were but indifferently qualified in this respect. These young persons he kindly instructed in this particular branch of education at his own house, and afterward, chiefly at their request, published the grammar. He never designed it to be used beyond this school, but it soon found its way into other seminaries. It became in a short time a standard book, and for several years new editions of from 10,000 to 12,000 were published. The number of copies sold of "The Abridgment of the Grammar," which appeared in 1795, has been many millions.

The great success which attended these publications, together with the beneficial influence it had upon his mind, induced him to publish several other works. In the year that he published the "Abridgment of the Grammar" he published the "Exercises and Key." Shortly after, there appeared the "English Reader," the "Introduction to the Reader," works which soon obtained an extensive circulation in the schools of Britain as well as in America. Between the years 1802 and 1807 he published two French volumes, and a spelling-book for the use of schools. In addition to these works, for which he is chiefly celebrated, he wrote a short treatise "on the Duty and Benefit of a Daily Perusal of the Holy Scriptures," and edited "A Selection from Bishop Horne's Commentary on the Psalms."

The copyrights of all these works were sold to one of the first publishing houses in London, with the exception of the "Duty and Benefit of a Daily Perusal of the Holy Scriptures," and the "Power of Religion," which were presented to the booksellers without any pecuniary compensation. The sum which he received for the whole scarcely amounted to £3,000. The price was considered liberal by both the author and the publisher, and Mr.

Murray often expressed his delight that the copyrights had proved advantageous to the gentleman in Paternoster Row who had made the purchase of them. As far as he himself was concerned it made no difference, for his views in writing and publishing were never mercenary, his sole aim being to benefit others, the young in particular. The profits of his valuable publications he never applied to his own private use, but to charitable purposes, and it was to him the source of the purest satisfaction that, while he was the means of doing much for the education of the young, he at the same time was enabled to give a considerable sum to religious and benevolent institutions.

It is a singular fact that Mr. Murray should have written all these works when an invalid. During the forty-two years he spent in England he could take little exercise, with the exception of a drive in his carriage, or being drawn about his garden in a chair constructed for that purpose. For the last sixteen years of his life, he was entirely confined to his room, and yet his mind was hale and vigorous. He was a hard student; and when his wife or his friends expressed their apprehension that his close application might prove injurious to him, he would pleasantly say, "It is better to wear away, than to rust away." Not later than eight o'clock, summer and winter, he was rolled in a chair from his bed-room to his study, where he spent the day in writing, reading the Scriptures, and religious meditation. Never was a murmur heard to escape his lips. So far from this being the case, he was uniformly pleased, frequently cheerful, and always resigned. He often referred to the kindness of God, in preserving his mental faculties, and in giving him such an amount of temporal wealth as made him comfortable and independent, in blessing him with such an affectionate and beloved wife, and in the prospect which he had of a glorious immortality when life's journey closed. These were some of the things which cheered the heart of this excellent man during the period of his long confinement.

It is a singular circumstance, also, that his mental powers should have continued unimpaired to the very last. When fully fourscore years his mind was as vigorous as ever, and he was fully better than he had been for some years previous; and what was not less singular, his hearing was good, his memory uncommonly retentive, and his sight was so little injured that he could read the smallest print without the aid of spectacles. But the longest life must close, and the most useful man must bid adieu to the present scene. On the 10th of January, 1826, he was seized with a slight paralytic affection in his left hand which was

of short duration. On the 13th of February he had a return of the same malady, which, by the use of means, was for a time mitigated. In the evening he was seized with acute pain, accompanied with violent sickness, and all attempts to afford relief proved ineffectual. It was death, and no human skill could avert the stroke. He bore the pain, which was excessive, with great meekness and fortitude; and on the 16th of February he expired. He was interred on the 22d of the same month in the burying-ground of the quakers, in the city of York, in the presence of a large assembly, where his remains lie, "far from friend and fatherland," till the resurrection of the blessed.

Such is a brief sketch of Lindley Murray, the grammarian—and we must add, the philanthropist and the Christian. His endowments, intellectual and moral, were of a superior order; and few men have left behind them a higher reputation for wisdom, piety, and benevolence. His writings are a standing memorial of his literary and intellectual qualifications; and his conduct in all the relations of life testifies that he was a virtuous, generous, and noble-minded man. He was modest and humble, free from everything like literary egotism or pharisaical boasting. He was a warm friend to the poor; and he took a deep interest in all religious and charitable institutions. In his will, after making provision for his beloved and affectionate Hannah, and giving certain legacies to a number of relatives and friends, he left £25 each to seven different establishments at York, £200 to the British and Foreign Bible Society, and £200 to the African Institution. He directed that the residue of his property, after the decease of his wife, should be devoted to pious and benevolent uses.

Mr. Murray was a member of the society of friends. He, as might be expected, was much esteemed by them, and they greatly mourned his loss. He was one of their brightest ornaments. But though attached to that highly respectable body of Christians, he was not a bigot: he had a great respect for religious persons of every name; and used his influence to heal the breaches which unhappily exist in the Christian churches. He "loved the brotherhood," and he longed for the day when Christians would be of "one mind." His testimony on this point is so excellent, and so necessary to be remembered in these latter days, that we must give it at length:—

"We are long in learning to judge wisely of one another, and to make charitable allowances for difference of understanding, disposition, education, &c. Mankind are all brethren, the children of one Father; they should,

therefore, when we believe them to be sincere and upright, be received as fellow-partakers of the same privileges. . . . I respect piety and virtue wherever I meet them. It would be a proof of my own superficiality or depravity if I valued a truly religious man the less for the name and the profession which he sustains. I trust that I shall ever be influenced by the cheering sentiment that every man who sincerely loves God and works righteousness is accepted by him, and is entitled to universal esteem and regard."

We have seen a portrait of this interesting and estimable man. He had a noble, a majestic look; he was tall, well proportioned, and rather stout. He had an open, cheerful countenance, with a forehead somewhat elevated. His complexion was dark. Though long confined to the house, he was not sickly looking, but ruddy. His hair toward the close of life became perfectly white; and his whole appearance was dignified and prepossessing. A stranger in his presence felt a mingled sensation of admiration, reverence, and love; and often the remark was made that he realized our conceptions of the apostles and holy men who, in the early ages of Christianity, dedicated themselves to the service of God in advancing the religion of his Son.

SHIP ANCHORAGE AT WHAMPOA.

THE engraving gives a correct view of the island of Whampoa, lying in the Pearl river, about twelve miles east from Canton, in China. At this place the foreign vessels all anchor, and their loading is taken out by boats and carried to Canton, and their return cargo brought down. At the bottom of our engraving is represented a part of Dane's island, which is a small rocky hill, where sailors are buried who die at this port. The price for burial-ground here is sixteen dollars, and ten more for permission to erect a grave-stone.

West from Dane's island, at the left-hand corner of the engraving, is represented a part of French island, on which are the tombs of many foreigners, residents, and captains. The price of land here is very high.

Whampoa island is long and narrow. The anchorage extends two or three miles in length; the American vessels generally occupying the higher births, and the English the lower. The river varies from fifty to one hundred rods wide, and from three to six fathoms deep. The tide rises from three to eight feet. The village on Whampoa island contains several thousand inhabitants.

At the west end of this island is a petty cus-

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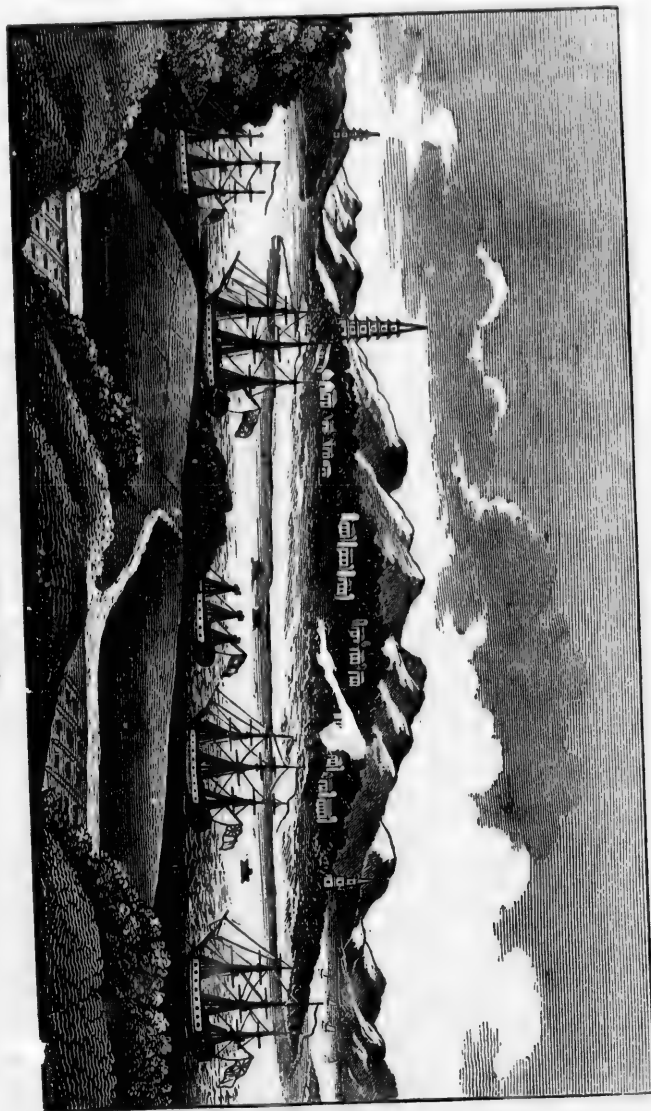
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WHAMPOA.

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Ship Anchorage at Whampoa, China.



tomhouse, or guardhouse, where all Chinese boats, having anything to do with foreigners, are obliged to stop and obtain a permit, called a *chop*, and the house is hence called a *chop-house*.

Three pagodas are represented in our engraving. That on the left hand near the edge, the top of which only is visible, is called, "the half-way pagoda," it being half-way from the anchorage to Canton. It is much decayed. This is the one from which some American sailors, some years ago, in a frolic, took one of the small images which are kept in the first story, and, on being discovered, they drowned the idol in the river, which cost the comprador and others some hundreds of dollars. The large pagoda, is called, by foreigners, the Whampoa pagoda. It is built of brick, nine stories high, amounting to from two hundred to two hundred and twenty feet. It is said to be in good repair. It is uninhabited, hollow, and octagonal. The date of its erection is said to be preserved within it, and to be about four hundred years ago. The natives believe that, being very lofty, it has an influence on the air, and serves to avert storms and tempests.

The other on the right side, is a small and modern-built pagoda, two or three stories high, and was built, as is said, to commemorate their victory over the British navy in 1808.

From the anchorage, at Whampoa, to the sea is about seventy-five miles. Macao lies near the sea. Lintin is an island in the river, half-way from Macao to Whampoa. Events within a few years past, have open several of the ports of China to the commerce of the world, and given a new impetus to trade with the celestial empire.

PROGRESS.

MOTION or progress is a universal condition of created being. There is nothing in a state of rest; there is no standing still. The planets are in motion, and so are the suns round which they roll. We speak of the restless wind; it veereth about continually. The clouds rest not, the rivers rest not; the troubled sea—it "can not rest." The problem of the perpetual motion is demonstrated every day in the great workshop of nature. Ascending from rude to organized matter, we meet with the same law or condition of being. The fluids of living creatures, the juices of plants, are never altogether dormant. When they cease to move, there are dissolution and death—a change, but still no rest. The material elements, set free from their wonted channels, are thrown into the great laboratory

of nature. They are dissolved—resolved into their constituent elements—and again thrown into new combinations. It is not a mere whim of fancy, to suppose that the rose of last summer will reappear in the snow-drop of next spring, and that we shall again meet with the lily of the valley in the blooming heather-bell.

Passing from the material to the immaterial world, the same remarkable fact meets us. In the regions of thought and consciousness, there is no repose. The man of to-day is different from the man of yesterday. On the wings of restless thought, he has surveyed anew some provinces of the universe, which he had before visited, and seen them, as he had never seen them before; or has dived to depths, or soared to heights, profounder or higher than upon any of his former wanderings. In either case, he returns changed from what he was. Others of the shows and forms of nature, have been mirrored upon his soul. His emotions and affections, his feelings and passions, have been stirred, agitated—tossed it may have been—into multitudinous commotion. He has been the scene of a moral storm, and a change has passed upon his moral nature. The body of the stout-limbed and strong-armed man, whose "breasts are full of milk, and whose bones are full of marrow," is not more different from that of the red palmy infant, or light-hearted boy, than is the mind of the one from that of the other. Progress is a universal condition of intellectual existence—with one exception; and that is in the case of Him who is "the same yesterday, to-day, and for ever."

Looking more closely at this perpetual motion, we find that it is very irregular—not at all straight forward. This peculiarity of it is as universal as is the fact itself. It prevails in the rude unorganized world; in the world of organization; and in the world of mind. The spheres move in circles or ellipses. The growth of the vegetable world is intermittent; and not less so is the growth of our intellectual and moral nature. The ocean tides are in perpetual flux and reflux. From singing its hoarse tempest-tune, the wind proceeds to warble its breeze-melody. From racing on the skyey plains across the face of the moon, the clouds assemble together as if to celebrate their sabbath in peace. And in the motions, and progresses of mind we can appeal to the experience of our intelligent and reflective readers, whether this flux and reflux, this circular motion, this intermittent life, is not as strongly marked there as in the external world.

There is a moral significance in this great natural fact, commensurate with the greatness of the fact itself. Does it not shadow forth the doctrine of human progress? And is not

this one of the most important and pleasant doctrines which the mind can contemplate? We see the whole material universe in motion. The law of progress is upon it, and guided by that law it moves on toward some grand consummation, which, though ever nearing, it may never reach. In imagination's eye, we see the worlds rising above the region of shadows, and emancipating themselves from those chaotic influences by which they are yet partially bound; and we can anticipate the time when "the light of the moon shall be as the light of the sun, and the light of the sun as the light of seven days."

But by far the highest and most delightful aspect of this law of progress, is that which has reference to rational life and its destinies. Here also, as in the material world, we meet with circular and intermittent motion, and sometimes with what appears to be retrogression. But it is impossible for a man to move round a circle of thought without increasing his intellectual vigor. His motion may not be directly upward; but in spiral circles, each rising above the other. By this winding staircase he mounts to higher regions of intelligence, and at every succeeding step has a wider range of vision; until at length, though not at last, he gazes around him with the ken of an angel. And while the horizon widens, and the future brightens upon his eye; while he descends the far-off mountain-tops, radiant with the suns of eternity, he does not lose sight of the past; but its joys, more joyful than ever—its brightness, still brightening—its songs of gladness attuned to more soothing melodies, or harmonious concords—its cares and sorrows mellowed by distance—its yesterdays, hallowed by to-day, lie treasured up in his memory, and wander, a ceaseless music, among his heartstrings.

It is a blessed and bliss-giving doctrine, this of human progress. Yet sometimes we rebel against it, and lightly esteem the priceless inheritance. We would blot it out from star and comet, from sun and moon, from the whole host of heaven, which, in their ceaseless motions, hymn it in our ears. We would blot it out from the million-fold objects on which it is written over all the earth. We would blot it out from our own heart and soul. For have we not regrets and longings for the past? Do we not sometimes say of the present, "here would we make our rest for ever?" It is not difficult to explain those faithless and effeminate moods and wishes. When perplexities annoy us, and a host of difficulties surround us—when the battle of life waxes hot against us, and we seem to be losing ground—we would willingly take refuge in those early days when as yet responsibility was scarcely laid upon us, and others fought

our battles; or when friends are around us, and health dances in every vein, we would vainly cling to both, and rather make sure of the joys we have, than risk the loss of them, for others which we know not of. But reflection soon convinces us that there is no going backward; a little more, that there is no standing still; and yet a little more, that it is not desirable to do either the one or the other; but that the doctrine of progress is as desirable as it is ennobling.

But, after all, the human heart sympathizes with this doctrine of progress. Schiller's sublime hymn upon hope, can scarcely fail to agitate tumultuously yet delightfully the human breast:—

"The future is man's immemorial hymn,
In vain runs the present a-wasting;
To a golden goal in the distance dim,
In life, in death, he is hasting;

The world grows old, and young, and old,
Yet the ancient story still bears to be told.

"Hope smiles on the boy from the hour of his birth,
To the youth it gives bliss without limit;
It gleams for old age as a star on earth,
And the darkness of death can not dim it;
Its rays will gild even fathomless gloom,
When the pilgrim of life lies down in the tomb.

"Never deem it a shibboleth phrase of the crowd,
Never call it the dream of a rhymer:
The instinct of nature proclaims it aloud—
We are destined for something sublimer!
This truth, which the witness within reveals,
The purest worshipper dearest feels."

Seems it not as if an angel had sung it? and as if while he sang, another angel had drawn aside—thrown to right and left—the curtains of futurity, and a flood of glory from the land that is afar off had spread around our path? Who would go backward now? Who would stand still? What are the perils that lie between us and those regions whither the bright inhabitants are inviting us? They are not "worthy to be compared with the glory which shall be revealed." It eclipses the brightness of our midsummer sunlight; it blots out all the stars. It draws us with the cords of a sweet compulsion toward its own fountains; and we willingly leave behind us our dearly-cherished earth, and go onward to perfection.

This doctrine of progress is proclaimed, trumpet-tongued, by innumerable providential facts. History instructs us that the human race have gravitated, however little and however slowly, toward the centre of perfection. It is engraven on the human heart—it is entwined with our intellectual being; and hence those longings after immortality, those aspirations for something holier and sublimer which we have all experienced in our better moods. That which external nature declares, and which our hearts long for, has had light shed

upon it from the pages of revelation. There we are instructed to leave first principles and go on to perfection—are taught to expect a millenium for the world, and something more glorious than eye hath seen, or ear heard, or heart hath conceived, beyond it.

Contemplated in the light of this great truth all difficulties vanish. The enigma of human life becomes a thing which a child can understand. We are surrounded with evil and suffering. A moral chaos rages around us, in the vortices of which, we are sometimes apt to think, all beauty and goodness are in danger of being swallowed up and lost. Thus it has been for nearly six thousand years. Nations have run the circle of crime and suffering; have lived unhappily and passed away ingloriously. Others have succeeded them, but to run the same fatal circle, and to reach the same inglorious goal. As with nations, so with individuals; only they have played a briefer part. It is a dark and melancholy picture. But when surveyed in the light of this law of progress; when we are able to believe that in this moral chaos there has been a principle of order, ever tending to mould it into an harmonious and orderly system; and when we find from history, that this principle has not operated altogether in vain—we see the possibility of a millenium for the world; and when we think upon what individual men have become—when we remember that the law of progress is upon all, and that a moral gravitation attracts all toward its centre of inconceivable happiness and unseen beatitude—the seeming chaos ceases to send forth its discords; light flashes upon its darkness; it begins to rise, and soar, and sing—onward, upward, without rest, for ever and for ever!

Our brief article is suggestive rather than illustrative. But its leading idea radiates in all directions—backward, to the morn of time; forward, through the cycles of eternity. We must read history with a faith in this law of progress; and, with the same faith, we must read the brief and feverish history of our own life. Note its small and feeble beginnings. Look at the hope in the cradle, the prattling child at its mother's knee. Is it not something worth thinking of, that that child has implanted within it faculties capable of expanding to the dimensions of those of the archangel—affections capable of loving with a love pure and warm as that of the seraphim? Not only so, but also of reaching the height to which those great and pure beings have now attained? Here the optimist can revel, and luxuriate; the great facts of nature, his own reason, and revelation also, assuring him that his faith and rejoicing are well founded. And while a sound philosophy will teach him

that the doctrine of human perfectability is a noble one, it will also teach him of another and more exalted doctrine—that of the eternity of human progress.

THE LAW OF KINDNESS.

THE power which this law now has upon society is one of the happiest effects of the diffusion of Christian principles. With all its pride, self-seeking, and vice, it need not be doubted that there is more kindness in the world at present than at any former period of its history. The annals of antiquity, while recording not a few instances of heroism and devotion, seem to hold them up rather as exceptions to the prevailing selfishness and cruelty, than as examples of the general tone of society. Their heroes are exhibited as objects of wonder rather than patterns for imitation. Now-a-days, mankind are gradually getting on more friendly terms with one another. They seem to have found out that there is really more pleasure, and profit too, in good-nature and kindly intercourse, than in blustering, quarrelling, and fighting. Deeds of atrocity, which in former times were looked upon pretty much as matters of course, can not now be committed with impunity. Any one known to have done or sanctioned an act of wanton cruelty to a fellow-creature, or even to an inferior animal, is from that moment a marked man, and can not be tolerated in any circle, even the lowest. Society has feelings attuned to the great doctrine of human brotherhood, and will not submit to have them wantonly outraged. "Hypocrisy," says an illustrious moralist, "is the tribute which vice pays to virtue;" and even the rudest natures must now assume at least the appearance of civility and courtesy, if they would not dwell altogether apart from their kind.

The time is not long gone by, when fighting was looked upon as almost the only real work men had to do upon the earth. Only a few centuries ago, our own forefathers were much more like worshippers of Thor and Odin, than Christians, as they fancied themselves. Every country in Europe—every province, district, town, nay, family—had their "natural enemies," with whom they deemed it quite right and proper to fight whenever the humor seized them. Up to the middle of the fifteenth century, hardly one of the kings of England or Scotland died a natural death. Fathers destroyed their children, children deposed and murdered their fathers, without mercy or remorse. A man's worst foes were those of his own household; and yet the perpetrators of these atrocities, so soon as they had secured

their own position, went forth in high state and honor, no one daring to say they had done wrong. In our times, even the most towering ambition would utterly fail in its purposes did it seek to compass them by such unscrupulous means. Natural enemies is a term which nobody thinks of now using. If war is still defended, it is entirely on the plea of self-defence—as a coarse but necessary kind of police regulation, to check the encroachments of licentiousness, tyranny, or rapacity. We hear much less about its glorious, and a great deal more about its uselessness, impolicy, and guilt. Duelling, that most barbarous legacy of barbarian times, is fast becoming unfashionable and even odious. Penal laws, about the last things cautious men like to meddle with, are being gradually ameliorated. Prevention of crime, rather than the punishment of it, is now the prominent tendency of our criminal enactments; and it seems to be felt that something of pity for the criminal may be consistent with hatred of crime, and the preservation of good order. For all this we do not think the world any better than it should be, or give it one particle of credit. It is all going on, just apparently because people can not help it; because there is a power at work stronger than the bad passions of human nature; because Christianity, in spite of all obstacles, is becoming the great law of society.

In the domestic relations of life—those simplest, most spontaneous, yet most permanent of all institutions—these principles have achieved some of their noblest triumphs. Few sufficiently reflect upon what has thus been done for the elevation of the female character. Yet that revolution which raised woman from the rank of man's slave to that of his companion, which unfolded all the tenderness and strength of her nature, by proclaiming her an heir of immortality and a daughter of heaven, is one of the most momentous ever achieved. It has made her a help meet for man—his better genius, to wean him from vice and allure him to virtue. We hesitate not to say that the true character of woman is unknown, her rights unacknowledged, beyond the boundaries of Christianity. Once step without the sphere of its operations, and we find her degraded and oppressed, and men by consequence sensual and brutalized; and exactly in proportion to the strength of its influence in any quarter, is the true dignity of woman estimated, and her power appropriately exerted. If, as we devoutly believe, our mothers, wives, and daughters, are, on the whole, patterns to their sex throughout the world, it needs little penetration to see whence this lofty distinction is derived. That gentle and devoted kindness, in which lies the secret of their influence, is but the reflection of the universal

benevolence which Christianity inculcates, and which has won for them from the haughty lords of creation something like an equality of privileges.

In the mode in which the education of children is now conducted, very great improvements are perceptible. We do not thereby allude to the more useful and practical nature of the knowledge imparted, but to the more kindly manner in which this is done. The stories our grandfathers tell us about their schoolmasters almost make our hair stand on end. They seem to have been the veriest tyrants in existence. They taught their pupils as bears are taught to dance—simply by flogging; and never dreamed that the little learning they had to communicate, could be drilled in by any other process. To the axiom of the wise man, "He that spareth the rod, hateth the child," they gave the fullest and most literal interpretation. The teachers of our day are discovering much milder and more effectual modes of imparting knowledge. Children are coming to be regarded as beings who have affections to be won, and understandings to be appealed to; and of course, the birch and the strap are fast disappearing. Now, we hold this state of things to be one of the surest indications of an improved moral tone in society. No teacher who reflects that the child committed to his charge is an immortal creature like himself, to man whose mind is imbued with true Christian benevolence—and such only are entitled to hold the high position of instructors of youth—will seek to impart knowledge through the medium of cruelty. In fact, any one who should attempt to do so could not compete in the market. His method would not work; or it would work so lamely in contrast with the far more effectual systems of which kindness is the basis, that he would be compelled to change it, or be driven from the field. Who can estimate the progress future generations, trained up under these better principles, are yet destined to make in knowledge and virtue.

In many of the other relations of society, the same tendencies may be seen in operation. There are a great number of good, kind people in the world just at this moment. Let any one look around, among his friends and neighbors, and try to reckon up the various acts of real benevolence they have performed toward himself—the many obligations he has received from persons who had nothing to expect from him except perhaps his thanks—and he will be surprised at the largeness of the catalogue. Such people may not be Christians in the highest sense of that high title; but the power of Christianity constrains them notwithstanding. Then look at our benevolent institutions—our hospitals, our infirmaries, our

societies for the relief of the stranger and destitute, our bible and missionary associations, to say nothing of the heroism which inspires high-souled and disinterested men to go forth to distant regions, braving pestilence, and famine, and the cruelties of savage tribes, to communicate the "glad tidings of great joy."

There are not a few philosophers who puzzle themselves to account by other causes than the real one for the progress society has made. They would seek these in the heights above or in the depths beneath, rather than in those sovereign principles by which the diffused spirit of Christianity speaks everywhere to their own hearts. Some ascribe the improved tone of manners and morals to a vague necessity of advancement, impressed they neither know how nor why on human affairs. Others look for its cause in the progress of commercial intercourse; and place the gradual regeneration of the world to the account of mere selfishness. Others, again, think they have found it in the diffusion of secular knowledge, and regard intellect as the great ameliorator of the world. Such persons are not perhaps wilfully blind; but they show how willing men are to take credit to themselves for blessings which they owe entirely to the bounty of Heaven. There is in the world one power, omnipotent and everlasting, and that power is love—the gift of Christ. No social institution can conflict with it—no one based on it will ever perish. It possesses a creative and sustaining energy which nothing can resist. Pride, ambition, anger, all merely human passions, exhaust themselves, and leave desolation behind; but their effects soon disappear, and on the ruins they have ceased divine love rears new structures which will last for ever. That silent but sure progress of society, which the atheist ascribes to an aimless necessity, the Christian regards as the natural operation of the principles of the gospel; and he views the extended intercourse and diffused knowledge of the times as vehicles whereby its principles may be more widely communicated. These principles go forth to an assured triumph; for their great law is the perfection of all things—the law of benevolence—of love.

These remarks are thrown out chiefly as hints for reflection, and not without the conviction that there is much to detract from the cheerfulness of the view we have taken. The law of kindness, the obligation of continually doing good, still requires to be far more universally felt. Even good men, who would little relish to be called unchristian, must be conscious of a frequent tendency to act as though it admitted of some exceptions and reservations. There is current among the French a legend of one of their early confes-

sors, which very quaintly embodies the operation of this tendency. Craving the indulgence of the reader, we shall offer it in illustration, the more readily as it may excuse us from any seeming encroachment on the province of the pulpit. Listen then to the parable of the Hermit of Gaul:—

At a time when the majority of the tribes of Gaul were yet ignorant of the gospel of Christ, there lived an old man called Novaire, who had freely received the glad tidings, and diligently sought to comprehend them thoroughly. Abandoning the pleasures of the world, he retired to a solitary hill, near the place where Lillebonne now stands, and there reared a cabin of turf, where he dwelt alone, alternately occupied in endeavors to expand his own views and to communicate the truth to the people round about.

Here it came to pass, after much meditation and prayer, that the dark veil which shrouds the invisible world from mortal view was lifted from his eyes, and he was permitted to gaze on the pathways of the sky, without losing his ken of earthly things. He distinguished at the same time the secrets of the visible and invisible universe. His vision wandered over the woods, the plains, the waters; then, glancing higher, it embraced the region traversed by the messengers of light; while, above all, it penetrated into the celestial habitations. He listened devoutly to the music of the spheres, the voice of the cherubim, and the hosannahs of the blessed. Angels brought him food, and freely discoursed to him on these secrets which are hidden from the world. Thus his days passed in a perpetual and heavenly delight. Familiarized to the intercourse of pure intelligences, he gradually felt all vulgar ambitions dying away within him, as the lessening stars vanish before the sun; and, proud of a knowledge thus lifted above the earth, he wished still further to penetrate the mysteries of God. While listening to the living accents which composed the eternal hymn of the creation to the glory of its Author, he constantly said to himself—

"Why can not I understand what the birds utter in their songs, the breezes in their whisperings, the insects in their hummings, the waves in their rolling, the angels in their celestial hymns?—in these ought to be found the great law which rules the world!"

But all the efforts of his mind to penetrate so profound a mystery were useless: he acquired nothing by his endeavors save hardness of heart and spiritual pride. His visits of mercy to the plain became less frequent, and his intercourse with its inhabitants more haughty and supercilious; for the growth of knowledge by itself can only be likened to that of the trees of the forest, which can not extend

their roots without drying up all around them. That knowledge may be beneficent and fruitful, it is necessary it should be watered from the fountains of the heart.

One day, when the hermit had descended from his mountain, which preserved a perpetual verdure, in order to traverse the wintry valley below, he saw coming from another direction a numerous group of men, who were leading a criminal to the scaffold. The peasants gathered to see him pass, and spoke loudly of his crimes; out the doomed one smiled as he heard them, and, far from giving any sign of repentance, he seemed to glory in his past misdeeds. At length, as he passed the recluse, he all at once stopped, and cried out in a tone of railleury—"Come here, holy man, and give your blessing and the kiss of peace to one who is going to die."

But Novaire indignantly repulsed him, saying, "Pass on to your fate, miserable wretch; pure lips may not be contaminated by contact with such as thee."

The poor creature turned away without further reply, and Novaire, still agitated, proceeded onward to his hermitage.

But when arrived there he paused with a looked of consternation: the aspect of everything had changed. The trees which the presence of angels had preserved in perennial verdure, were become leafless as those of the valley; there, where, a few hours before, the blossoming eglantine had exhaled its delightful fragrance, the white hoar-frost was glistening, and the scanty and withered moss revealed the bare rocks beneath.

Novaire longed anxiously for the coming of the celestial messenger, who every day brought him his food, to learn the cause of this sudden change; but the messenger appeared not; the invisible world was closed to him, and he was thrown back into the ignorance and miseries of humanity. He understood that God had punished him, though he guessed not the fault he had committed. However, he submitted without murmuring, and kneeling on the hill—"Since I have offended thee, O my Creator," said he, "I am worthy of the utmost punishment thou mayest inflict. From this day I shall quit my solitude; and I vow to travel straight on, without other repose than that of the night, till thou art graciously pleased to vouchsafe me some visible token of thy forgiveness."

With these words Novaire took up his staff, girded his loins with a leathern belt, fastened his sandals, and, casting a parting look on his beloved residence, he directed his course toward the wild peninsula which, at a later time, received the name of the "land of blossoms." In this country, now covered with villages, farmsteads, and cultivated fields, no path could

then be traced except that worn by the footsteps of the unreclaimed beasts of the forest. In his toilsome way he had to ford rivers, traverse morasses, penetrate thickets, sometimes finding, at wide intervals, a few poor habitations, whose masters frequently refused him entrance. But Novaire suffered all these fatigues and privations with great serenity. Sustained by the hope of once more recovering the lost favor of Heaven, he opposed resigning to grief, and patience to all obstacles.

In this way he at length arrived at the extremity of the peninsula, not far from the spot where the celebrated abbey of Jumièges was afterward built.* Here a forest then extended, whose recesses afforded shelter to pirates, who, in light shallops of osier covered with skins, attacked the ships which passed up and down the river laden with merchandise. One evening, as the traveller quickened his pace to reach the banks, he came upon an open glade, where four of these outlaws were seated round a fire of dried brushwood. At sight of him they rose, ran toward him, and brought him near the fire, the more easily to despoil him. They seized his book, his cincture, his garment; and, seeing that he had nothing else, they deliberated whether he should then be set at liberty. But the oldest of them, named Toderick, suggested that he should be kept, and made to row the boat, to which the others agreed.

Novaire was then bound with chains, and became the slave of the four pirates. He was compelled to cook for them, to clean their arms, mend the boat, and sometimes to steer it, receiving no other recompense for his labor than blows and hard words. Toderick especially showed him little pity; and, joining railleury to cruelty, constantly demanded of the poor prisoner what availed the power of his God. One day, however, the four pirates assailed a vessel descending the Seine, which they supposed to be laden with rich merchandise; but it so happened that she contained a body of armed men, who saluted them with a shower of arrows so well directed, that three of the bandits were killed on the spot, and the fourth, who was Toderick, received a wound in the body, apparently mortal.

Novaire then turned the prow of the shallop toward the river bank, which he succeeded in gaining. He now at length found himself at liberty, and his first impulse was to fly from a place where he had endured such misery; but touched with pity for those who had so long injured him, he gave sepulture to the

* The peninsula alluded to is formed by the windings of the Seine, a little below Rouen in Normandy. The abbey of Jumièges was founded in the seventh century, and became one of the most distinguished religious houses in France. It is now in ruins.

three slain pirates, and then approached Todrick. The unhappy man, judging Novaire by his own savage disposition, supposed that he would now take vengeance for the cruelty he had shown him, and said, "Kill me, but do not torture me."

But Novaire replied, "So far from taking thy life, my friend, I shall do all in my power to save it."

The pirate was astonished and deeply moved. "That is not in the power of man," said he, "for I feel the chill of death creeping fast round my heart; but if you indeed wish well to me, notwithstanding all I have made you suffer, give me a little water to quench my thirst."

Novaire ran to the nearest spring, and brought water to the wounded man. When he had drunk, he raised his eyes, now fast glazing in death, and looked steadily on the hermit. "Thou hast truly returned good for evil," he said, faintly; "wilt thou do yet more, and accord the kiss of peace to a guilty and dying creature?"

"I will, cheerfully," said Novaire; "and may it prove to thee a sign of pardon from that merciful God whose law thou hast so long broken, and whom thou hast offended more deeply than thou couldst any of his creatures." With these words he knelt beside the pirate, who received the kiss of peace, and immediately expired.

At the same instant, a voice resounding through the air uttered these words: "Novaire, thy trial is at an end. God has punished thee for having refused thy pity to one who was merely guilty; thou shalt now be rewarded for having blessed him who was thine enemy. All the treasure thou didst lose by hardness of heart, thou hast regained by a victorious charity. Raise, then, thine eyes, and open thine ears, for now again thou canst hear the voices of the earth and of the heavens."

Novaire, who had listened to the voice mute and trembling, raised his head. The trees, blighted by the blast of winter, seemed all at once to have become verdant; the frozen brooks again flowed in their channels; the birds' song among the blossoming shrubs; while, high in heaven, he beheld, like Jacob, the angels ascending and descending on their missions to the earth, the cherubim sailing amid the clouds, the archangels flashing their swords of fire, and the saints chanting their celestial hymns! And all these several sounds formed one harmonious anthem, of which the ever-recurring burden was—"Love one another."

Then Novaire pressed his forehead to the ground, and exclaimed—"Mercy, O Father, ever blessed! This day have I indeed learned what is *the great law*."

ST. PAUL'S CHURCH, NEW YORK.

ECCLESIASTICAL architecture in the United States owes much to the taste and liberality of the protestant episcopal church. In proportion to her numbers and wealth, she has surpassed all other denominations in the costliness and elegance of her edifices for public worship. Her churches are among the most admired ornaments of our large cities. She has, for the most part, adopted the style of architecture best adapted to the purposes of religion, and her models have not unfrequently been selected from the most chaste and splendid structures of past ages. New York has from an early period taken the lead in the beauty and grandeur of her church edifices; and several of them are unsurpassed by any similar structures in this country. Trinity church is a magnificent building. St. Paul's and St. John's are universally admired; and, in point of beauty, Grace church has no superior. St. Paul's, though erected before the revolution, is one of the richest and most imposing ornaments of the city, and is universally regarded with admiration.

The accompanying beautiful engraving presents a view of this most ancient and venerable of the episcopal churches in the city of New York, taken from a position near the corner of Fulton street and Broadway. It of course presents the south side, the eastern portico, and the steeple of this beautiful church. The plate shows also the junction of Broadway and Vesey street, and on the opposite corner from the church, the Astor house, one of the largest, and the most costly buildings of the kind in the Union. This immense pile was erected by John J. Astor, of granite from the eastern quarries, at the cost of half a million of dollars, for the purpose, as nearly all his investments have been, of personal emolument, combined with public utility. In its imposing exterior, in the arrangement of its various apartments, and in its general adaptation to the object of its construction, it is believed to be superior to any similar establishment on this continent. The space it occupies in the engraving seemed to require this brief notice.

There are few, if any, more chaste and finished specimens of ecclesiastical architecture in the United States, than St. Paul's chapel. It is now the oldest edifice belonging to the episcopal church in this city. The first Trinity, of which corporation St. Paul's has always been a chapel, was erected at an earlier period—so also was St. George's, but the former was destroyed in the great conflagration of 1776, and the latter, with the exception of the walls, was burnt in 1814. St. Paul's was commenced in 1764, and finished

NEW YORK.

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in 1766. It was then a beautiful edifice, but there have since been made some alterations, which have greatly improved in general appearance, and given it the strikingly chaste and harmonious proportions exhibited in the engraving. It was erected by the vestry of Trinity, and chiefly at the expense of that corporation.

Divine service was performed for the first time in St. Paul's on the 30th of October, 1776. The Rev. Samuel Aschmuty, D. D., was then rector of Trinity; and the Rev. Charles Inglis, since bishop of Nova Scotia, and the Rev. John Ogilvie, D. D., were assistant ministers.

St. Paul's chapel is situated on the west side of Broadway, near its junction with Chatham street—the grounds connected with it being bounded on the north by Vesey, on the east by Broadway, on the south by Fulton, and on the west by Church street. The ground on which it stands, with the surrounding cemetery, is four hundred feet in length, by one hundred and eighty in breadth, and is enclosed by a substantial iron railing. The material of which it is constructed is a dark gray stone. The order of architecture is chiefly Corinthian. Its thick and massive walls form a parallelogram, containing eighteen thousand two hundred and twelve square feet, the main body of the edifice being one hundred and twelve feet, six inches in length, and seventy-three feet in breadth. Its east end fronts on Broadway, and presents a handsome portico, composed of four Roman Ionic columns, supporting a chaste and beautiful pediment. The depth of the portico is eighteen feet, six inches, and it is raised about three feet above the surface of the ground.

On the west end of the chapel there is a tower projection of seven feet, six inches, and a tower portico of thirteen feet. These projections, added to the main building, make its whole length one hundred and fifty-one feet, six inches. In the place of the present elegantly-proportioned and handsome steeple, there was originally a small, ill-shaped dome, which served rather as a covering for the tower, than as an ornament to the edifice.

The feeling has generally prevailed among churchmen, that the eastern end of their churches was the appropriate place for the chancel. In accordance with this feeling, the tower and dome, and afterward the steeple of St. Paul's, were erected on the western end, the east being reserved for the chancel, as its proper position. The height of the tower is one hundred feet, and it is constructed of the same material as the main building. Above the roof there are two sections. The lower one, with the exception of what are called rusticated corners, is perfectly plain.

The upper one has pilasters on the angles, and two Ionic columns in the centre. These columns sustain a small pediment, over which, between two consoles, inverted, is placed the dial of the clock. In this upper section are two bells, which formerly belonged to Trinity. The quadrangular section immediately above the tower, is of the Ionic order, with appropriate columns, pilasters and pediments. The other two sections are octangular, of the Corinthian and composite orders, supported by columns at the angles. The faces of the highest section are well panelled, and taper gradually to the large gilt ball which crowns the apex.

The steeple rises one hundred and three feet above the tower, to the top of the vane, making the whole height two hundred and three feet from the ground. It is built of wood, but it is painted to resemble stone, and it has much the appearance of being really so. It was not erected until some time subsequent to the revolution. The fine proportions and beauty, which now render it scarcely inferior to any other, in either the city or country, are owing to its having been, with one or two unimportant exceptions, an exact imitation of the steeple of a church, which was designed by the great architect, Sir Christopher Wren, generally known as St. Martin's in the Fields—a church in London, much celebrated for its architectural elegance.

The front of the chapel is generally more admired for its harmonious proportions, and general beauty, than any other part of the building, not even the steeple being excepted. The portico is a superb specimen of science and art. Four Roman Ionic columns support a pediment, which is ornamented by fine projecting cornices. The effect is much increased by two circular windows, between which, at an equal distance from either, in a niche, is placed a colossal figure of St. Paul, leaning on a richly carved sword. The altar-window, under the pediment, adds greatly to the beauty of this part of the chapel. It has three compartments, the centre of which runs into an arch, and is separated from the side ones, by two Ionic pilasters. This window, the glass of which is colored, lights the chancel. From the portico there are two entrances to the interior of the chapel, one on either side of the altar window; and over each of them is a window, with an arch suitable to its position. In the small vestibule at these entrances, a spiral staircase leads to the galleries.

A splendid monument, in basso-relievo, erected to the memory of Major-General Richard Montgomery, by the Congress of the United States, occupies the middle of this window. The following is the inscription upon the monument:—

This monument is erected by order of Congress, 25th January, 1776, to transmit to posterity a grateful remembrance of the patriotism, conduct, enterprise, and perseverance of Major General RICHARD MONTGOMERY, who, after a series of successes, amidst the most discouraging difficulties, fell in the attack on QUEBEC, 31st Decbr., 1775, aged 37 years.

Underneath this, cut in a white marble slab, fixed in the wall, is the following record:—

The State of New York
caused the remains of
Major Genl. RICHARD MONTGOMERY
to be conveyed from Quebec,
and deposited beneath this monument,
the 8th day of July,
1780.

The interior of St. Paul's chapel has been not much less generally admired than its exterior. Though a period of eighty years has passed since its construction, yet there are few churches which present an interior finish, so chaste and beautiful.

The chancel is raised one foot six inches above the ground floor. It is fifteen feet deep, by twenty-nine in length, and is enclosed by a carved railing. Against the walls which separate it from the eastern vestibules, are two Ionic pilasters, from the entablatures of which an arch is thrown across the body of the chapel, forming a line of division between the chancel and the nave.

The altar is placed under the altar window, and above it are the two tables of the law. The whole seems to be illumined by rays from a representation of the visible manifestation of the Deity on Mount Sinai. The walls of the chancel are entirely without ornament, but they contain six mural monuments of beautiful design, and admirable sculpture.

In the cemetery around the chapel, there are numerous monuments, some of which are fine specimens of art; but the most remarkable one, in its design and execution, is that of Thomas Addis Emmet, standing near to the chapel, on its south side, and to Broadway. The material is white marble, of thirty feet elevation, having on the face toward Broadway a bust of Mr. Emmet, sculptured in basso-relievo, and on three sides inscriptions in the Latin, English and Irish languages; the Latin by John Duer, LL. D., the English by the Hon. Gulian C. Verplanck, and the Irish by the late Right Rev. Dr. England, Roman Catholic bishop of Charleston, South Carolina. The inscription in the English language is in the finest taste, and exceedingly beautiful; and it should have a place in every full description of St. Paul's chapel. It is as follows:—

IN MEMORY OF

THOMAS ADDIS EMMET,

Who exemplified in his conduct and adorned by his integrity the policy and principles of the United Irishmen — "To forward a brotherhood of affection, a community of rights, an identity of interests, and a union of power among Irishmen of every religious persuasion, as the only means of Ireland's chief good, as impartial and adequate representation in an Irish Parliament." For this (mysterious fate of virtue!) exiled from his native land.

In America, the land of freedom, he found a second country, which paid his love by reverencing his genius. Learned in our laws and the laws of Europe, in the literature of our times, and in the antiquity, all knowledge seemed subject to his use.

An orator of the first order, clear, copious, fervid, alike powerful to kindle the imagination, touch the affections, and sway the reason and will. Simple in his tastes, unassuming in his manners, frank, generous, kind-hearted, and honorable, his private life was beautiful, as his public course was brilliant.

Anxious to perpetuate the name and examples of such a man, alike illustrious by his genius, his virtues, and his fate; consecrated to their affections by his sacrifices, his perils, and the deeper calamities of his kindred, in a just and holy cause; his sympathizing countrymen erected this monument and cenotaph.
Born at Cork, 24th April, 1764. He died in this city, 14th November, 1827.

It is of sufficient interest to deserve record here, that General Washington, during his residence in New York, was a constant attendant upon the services, and a communicant in St. Paul's chapel. That great and good man was nowhere more highly appreciated than by the citizens of New York, and nowhere did his death cause more sincere and deep lamentations. His funeral obsequies were performed in St. Paul's, with imposing solemnity.

This church has stood eighty years, a proud monument of the taste of our ancestors; and it is still one of the richest architectural ornaments of this city, so much distinguished for the costly elegance of its churches, and the magnificence and beauty of its other public edifices.

LECTURES ON ASTRONOMY.—No. 6.

BY PROFESSOR O. M. MITCHELL.

IN the examination which I have thus far made, I have confined myself exclusively to our own solar system. I have announced the great laws by which it is governed; I have attempted to explain the manner in which these laws operate upon the various bodies belonging to it, and to show you how worlds are moving through space obedient to those laws and yet subjected to the influence of each other. But we are to leave this system, grand as it is, and traverse through regions and over distances which we have not up to

the present moment dared to conceive. I know how difficult is the subject which I am about to approach, and I approach it with embarrassment. I know how difficult it is to comprehend these immense distances—these vast periods, and these mighty and innumerable objects, in such a manner as may be presented intelligibly to the mind. Still we shall venture upon the attempt.

If it were possible to transfer you to the outermost limits of our solar system, and there, resting upon the body of the planet Neptune, we could look backward over the space we have traversed, we should find the sun, which to us is so brilliant and so magnificent, already diminished so as not to appear larger than does the planet Venus now appear to us on the earth. But think not that this diminution in apparent size will diminish in like proportion the light which the sun throws out; for if there be inhabitants there, they will receive more light from this diminished sun than could be thrown out by a hundred of our full moons; so it is still daylight to them.

But if objects are diminished by accomplishing this journey through space 3,000,000,000 of miles, what do we see when we attempt to cross that mighty gulf which still separates us from the nearest fixed stars? It is across this almost illimitable space that I wish to carry you. The unit of measure with which we have gone through the examination of our system, has been the distance of the earth from the sun—the radius of the earth's orbit. In making our measurements, we must adopt a different unit, for this is too small; and we propose to take as one unit of measure the distance to the nearest fixed stars. With that unit, if we can attain to the knowledge of its value, we shall proceed to measure the universe by which we are surrounded.

First, then, let us attempt to explain what is meant by *parallax*; for this term I shall employ frequently in the course of my remarks. The parallax of any body is the apparent change in the place of that body, occasioned by a real change in the position of the spectator. If I change my position in this room, occupying that of yonder individual, I find every other person apparently to have changed his place; this is a parallax change. As you have, while sitting in a railroad-car passing through the borders of a forest, fastened your eye upon an individual tree, and have seen the others apparently whirl rapidly around it, so is this apparent change in the position of the heavenly bodies. Now the question is this: Is it possible to determine any change in the place of the fixed stars, occasioned by a change of the place whence they are seen? If this can be done, measur-

ed, appreciated, and determined, then, knowing the distance which separates the two points of observation and the amount of change occasioned by the change of place of the spectator, we find, without difficulty, the distance of the object. When the followers of Copernicus announced that the earth revolved about the sun in a mighty orbit 200,000,000 miles in diameter, moreover, that the axis of the earth upon which it revolves once in twenty-four hours was ever parallel to itself; and still further, that this axis prolonged to meet the celestial sphere, was the north pole of the heavens, the object at once said, "It is impossible; because, if the earth's axis, being produced to meet the heavens, touches it in a particular point, this point carried parallel to itself around a mighty orbit of 200,000,000 miles diameter, will cut in the heavens a figure having also the same diameter; and certainly this circle described in the heavens will be visible to the eye." But it is not visible to the eye. If the whole diameter of 200,000,000 miles were filled by a globe as brilliant as our sun, at the distance of the fixed stars it would shrink absolutely into a point which no micrometer ever made by man could measure. Here there was a sort of indicative knowledge with regard to the distance of the fixed stars. It must be so great that the whole earth's orbit, viewed from them, would shrink into an invisible point.

So soon as telescopes were perfected and the division of the circle obtained in the most accurate manner possible, by means of which the most delicate observations could be made, the human mind again returned to this grand problem and attempted to pass these hitherto seemingly impassable limits to measure the distance of the fixed stars. And now let me attempt to explain one of the methods adopted to accomplish this grand object.

Suppose it were possible to erect in the centre of this room a rocky pier, going down through the base upon the solid rock itself, so as to be perfectly immovable. Now then upon this rocky pier let me adjust a telescope of the highest possible capacity, and let the axis of that instrument be erected so as to have a direction exactly vertical. Having accomplished this, let me screw it to this rock, so that it shall never move, but be for ever permanent. Now to determine the exact axis of this telescope and to make it appreciable, let me fix in the focus two most delicate lines of spider's web, which are so very fine that they may be regarded almost as invisible mathematical lines. Let them intersect each other in the axis of the telescope and their point of intersection upon looking upward, will give a precisely vertical direction. Now I have a piece of machinery prepared to make

my examination of a few of the fixed stars, to determine whether there be any change from the fact that the earth is sweeping round in its orbit. Place the eye to this tube, and watch till some particular star, that you may have selected and which lies exactly in a vertical direction, passing through the zenith shall reach precisely the central point of the telescope, so that the line of vision, like a prolonged axis, pierces the star exactly. Now we record the observation which is made at a particular hour, and when the earth shall have rolled round its axis and brought it to the same point we observe it again, and so through the whole year. Now then if there be no change, that star will ever pass at the same moment exactly through the same point across the axis of the telescope. But suppose it should deviate a little from the point of intersection, and at the end of the year it shall have described a minute orbit, the centre of which is the central point where the axis of the telescope pierces the heavens: the magnitude of this little orbit, accurately determined, is the amount of apparent change occasioned by the revolution of the earth in its orbit, and this would be the parallactic motion of the star.

This method was adopted by one of the distinguished astronomers who attempted the resolution of the problem of the distance of the fixed stars. He did not succeed: it defied his ingenuity; still, he was rewarded in his efforts, if not by the attainment of the object to be accomplished, at least by others equally important. He found the star upon which he fixed his eye moving, not as he supposed it must move, in parallactic change, but taking a different course. For a long time the cause seemed to be wrapped in impenetrable mystery; but he finally found it to be due to the fact that the earth was moving with a certain amount of velocity, and light also was coming with a certain velocity, and the two forces combined gave to that star an apparent motion which, when the cause was known, was perfectly explicable. He discovered in this way the *aberration of light*, and also a certain other change, shown by the fact that the earth's axis is not precisely parallel to itself, but owing to the influence which the sun and moon exert upon the protuberant matter around the equator, it is made to vibrate, as it were, through a very minute arc in the heavens. This is called *nutation*: and these two great discoveries were made in the effort to resolve the problem measuring the distance of the fixed stars.

I desire to trace up the history of this examination, to show how science has progressed, and how art has been gaining one victory after another, even when it seemed to be impossible to make the slightest progress. I

pass rapidly down to the second great effort made to determine the parallax of the stars.

Galileo had even projected this plan, but never found himself in possession of instruments requisite to make the examination. The plan is simple and will be easily understood by all who hear me. In examining the heavens, we find among the fixed stars certain ones that appear single to the common eye, but when examined with a powerful instrument they are found to be composed of two, three, four, and sometimes as many as six, clustered together so closely that to the naked eye they appear as a naked object. Now, after Herschel commenced his review of the heavens, he found these clustered stars scattered profusely, and the idea occurred to him that the apparent near proximity of them was occasioned by the fact that one was sunk in space far deeper than the other, and the visual ray passed near or exactly through the least distant one. In case this hypothesis might be received as true, these double stars, in which one of the objects was double the size, and in this sense appearing to be half the distance of the other, would furnish a most admirable means of determining whether any parallactic change took place in consequence of the revolution of the earth. Suppose I am so situated as to occult any object in this room by one of the columns before me: by throwing my head slightly to the right the object hidden will appear to come out on that side; or, by throwing my head to the left the same object will appear to come out of the other side. Just so in these minute double stars. If the observer start from one extremity of the earth's annual orbit, and find this minute star on the right-hand side of the larger one—if he come round and continue his observation till he reaches one quarter of the whole circumference, when he finds it is hidden behind the larger star—if he reach the other extremity of the circuit, and find how the minute star is coming out on the opposite side—if, moreover, this change occur every time the earth makes its annual revolution—it will demonstrate most conclusively that these changes are parallactic, and occasioned by the fact that the observer is sweeping around in the earth's orbit, and viewing the objects from different positions.

Such is the nature of the investigation undertaken by Herschel, and there seemed to be every reason to believe he would be successful. But did he succeed? No. He found that these stars were moving; and here again were his efforts rewarded by one of the most brilliant discoveries ever made. He found in these closely-united objects that there was a motion, but not of the kind he anticipated; he found that the one was moving about the other, and on a better view, that they were

both revolving about the common centre of gravity. Is it possible that these distant orbs were energized by the same kind of influence which operates on the earth's surface, and that this law of gravitation extending over this immeasurable gulf, seized these suns and held them obedient to its control, causing them to revolve about each other?

The announcement that these motions were going on, filled the astronomical world with astonishment. It seemed that a new field was suddenly disclosed which promised to be interminable. If these stars, so profusely scattered and so closely united, were really double suns, then had astronomy only begun its career. If to find the periods and measure the orbits of the planets had occupied the attention of the human race up to the present time, how much time would be necessary to measure the periods and determine the orbits of these mighty suns, sunk so deeply in space? But the effort has been made and it is progressing. A solitary object, one of a beautiful system, was taking up and measures made year after year, till finally a sufficient amount of data are obtained to commence the computation of the elements of the orbit. But what law shall be adopted? The law of gravitation is applied, and, wonderful to relate, these far distant suns are subjected to the same law that carries our earth about our sun.

And now such is the knowledge attained, with reference to these various systems, that we are able to tell their very position and periods, as we do with regard to the planets belonging to our own system. But up to this time, recollect, we knew nothing from the investigation with regard to the distance of these objects. To this wonderful discovery I shall again refer; but for the present permit me to pursue the history with reference to the determining of the parallax of the fixed stars.

When it was known that this method could not be successfully adopted, it seemed that the last hope was gone, and there could be no other plain more likely to end in success. But the skill of the artist had not yet been exhausted. In all preceding instruments it seemed there was difficulty, owing to the fact that the micrometer measured with accuracy small distances, but failed in larger ones.

Finally, of late, an instrument was invented by Fraunhofer, which measured with equal precision both great and small distances. It was called the heliometer. This new magnificent instrument was placed in the hands of a distinguished astronomer, one of the most illustrious men that ever graced the earth, and one better adapted to its use as well as to the critical examination of the great problem, than any man then living. He was urged by the great man with whom he was associated, to

undertake this problem by the use of the heliometer, hoping this way to obtain a series of observations that might render it successful. A few years since he commenced his observations. But the query arose: was there among the myriads of stars, some one object that would be more likely than all others to yield to his investigation? How could a choice be made? What process could guide him? Let me tell you.

By comparing the places of fixed stars determined by ancient astronomers, with those determined recently, it is found that those objects which are called fixed, are not really so, but are changing their places by slow and almost imperceptible degrees, so that at the end of two thousand years there is a manifest parallax among them. In later times, after the observations of other astronomers were compared, it became manifest that there was scarcely a solitary star in the heavens absolutely fixed in position. But if this were true, inasmuch as the sun was one of the fixed stars, is it not possible that it too is sweeping through space? This was a wonderful idea, truly. Now this apparent change among the fixed stars might possibly be accounted for upon the hypothesis that the sun swept through space, carrying the earth and all the planets with it, and thus caused these objects to change their apparent places among each other. If this hypothesis were adopted, those objects which were moving most rapidly would be among those nearest us, and most likely to yield results.

Again, he choose to select a double star, because if he could find a set which was united in a particular way, he would be able to measure with more accuracy the change that took place in the centre of the line that united the stars, than in any other way. He selected from the constellation of the Swan, double star number sixty-one, and commenced his measures upon the position of the centre of the line joining the two. He referred the central point to the intersection of this line with another perpendicular to it. Here he had to fix a point, to which with the utmost possible precision he found it practicable to refer that point, to ascertain whether any change was going, which should be due to the motion of the earth in its orbit. A year rolls round of unintermitted observation of the most accurate kind. He forms his series of places, notes every object, and finds to his infinite delight there is yet a certain amount outstanding, which upon examination depends upon the position occupied in moving around the earth's orbit. He does not venture to announce the discovery; he waits till he has repeated these experiments through the following year, and to his inexpressible satisfaction he finds the

same series occurring precisely in the same order as before. Night after night, and month after month, he watches this point, and again compares the computation of the place and finds the same changes precisely as in the preceding year. The conclusion could no longer be resisted: the mighty gulf had been passed, the distance of that object is known and its parallax is determined.

And now how shall I tell you the distance? If I speak of millions of miles it only confuses the mind. Let me use a different unit of measure. I have already told you that light flies with a velocity of twelve millions of miles in a minute. Now, then, in order to reach us from this star in the constellation of the Swan, which we suppose to be the one nearest, it must in its flight take ten long years to reach this planet. And this is the nearest of all the fixed stars by which we are surrounded.

Here then is our unit of measure; and if I have succeeded in carrying you to this point, our course onward is easy; for the moment we know the distance of one of the fixed stars, we feel confident that we can attain to others, and so onward and onward. Indeed, this has been literally the case; since I reached your city I have received intelligence from Struve, that he has determined the parallax of seven new stars. Although we find differences in these distances, we have reason to believe the average distance can not be less than that of number sixty-one in the Swan.

So soon, then, as we have ascertained the sphere which is described in order to reach the nearest of these bodies, the question arises: Are the stars scattered equally through all space? Is there any aggregation of those united by masses? Is there any law which governs these exceedingly distant bodies, so as to make clusters in particular quarters or regions of space? If we look out upon the sky, the eye is at once arrested by a beautiful belt of light that sweeps over the whole heavens, called the Milky Way. This, on examination, we find to be studded with millions of objects extending entirely around, forming a mighty zone of congregated stars which takes this peculiar figure. Let us attempt to analyze this figure and see whether it be possible to reach the uttermost limits, and know precisely the point by which it is circumscribed. To accomplish this we must make use of what is called the space-penetrating power. All I have to say on this point, will depend upon the manner in which I shall be able to tell you the meaning of that term; for when we have measured the distance of the fixed stars it seems impossible to go beyond that distance accurately; yet it is done approximately by this space-penetrating power of the telescope.

If the pupil of the human eye could be expanded to twice its present dimensions, it would receive light sufficient to enable it to penetrate twice as deep into space. It is found that it can now see a star of the sixth magnitude. But this does not give an exact idea of the space-penetrating power of the eye, because the distances are not in the exact ratio to the amount of light. A star of the sixth magnitude is twelve times more distant than one of the first. The human eye is capable of penetrating into space twelve times as deep as the line that joins it to the nearest fixed star. If we could increase the diameter of the pupil and make it twice as large, it would see twenty-four times as far. Now if we aid the eye by the telescope (it may be approximately done) how shall we determine the relative approximate power? I answer: By the diameter of the pupil, or the object-glass, of the instrument, we can arrive at a very accurate measurement, with regard to that matter. Allow me here to make a very familiar illustration. Suppose upon a level plane, indefinitely extended, it would be possible to erect posts a mile apart. On each of these posts I will place a board which contains a sentence in a given-sized letter. Now the first one is just visible to the eye so that it can be read at the distance of one mile, but to read the next one is impossible. I, however, provide myself with some assistance. I take a telescope and find that with it I can just read the sentence written on the second post. I take one with a larger object-glass and read the third: another larger still, and read the fourth. Thus I will always know the space-penetrating power of the instrument with which I read any one of the distances; and here is the principle—it is in this way we are able to penetrate from one to another depth, and to know what is the radius of the mighty sphere of which we are making an examination.

The first question is: Whether it be possible to penetrate through the depths of the Milky Way? Herschel attempted this again and again. He takes a spot just visible to the naked eye, and with a low magnifying-power begins his examination. He finds this spot showing hundreds of stars, and behind them appears to be a milky whiteness which indicates other stars more remote. He takes a telescope of larger power and this causes the spot to blaze with more stars; yet still there is a milky haze indicating that he has not yet penetrated the utmost depths. He takes another still more powerful instrument, and yet he does not attain the outermost limits, for still there is a haziness beyond. Finally he places his forty-feet reflector in the direction, and then finds the whole to glow with beautiful objects like diamond points upon the deep,

clear vault of heaven, without a stain beyond. Now he knows he has penetrated to the outside, and he knows how much power was required to take him there, for he has gone onward step by step till the last haze is removed. I have had occasion to go through the very same examination, and I can give not the slightest idea of the feelings produced, when upon opening the full power of the telescope, I looked entirely beyond the limits of the Milky Way and saw these orbs resting upon the deep unstained blue of Heaven.

Well, now, what is the depth of these strata? We find it impossible to gauge it; we throw out the sounding-line, as Herschel calls it, in every possible direction. He has done it, and the prominent part of this particular spot extends to such a depth that there must be a series of five hundred stars, one behind the other, and each point is remote from the other as is the nearest fixed star from us. Such is the depth of these objects. Now we are able to measure its figure and tell its dimensions. This has been done. I will not delay the audience by going through any explanations of the manner in which it was accomplished.

Having determined the figure of the Milky Way, the next point is this: When we stand out upon the outer circumference of this mighty circle, what is beyond? Is it possible there is anything beyond; or have we reached the ultimate limit? I answer, we have not reached it. When we look out upon the heavens, we find not only hundreds, but thousands, and, with the aid of the telescope, tens of thousands of islands, all as magnificent as this mighty cluster with which we are united, whose suns number hundreds of millions. Now, can we tell anything about their distance? Can we locate them in strata, as we locate the stars belonging to our own system? I answer yes: it is easy to estimate, with a given-sized aperture to any instrument, how far it will discern a star of the first magnitude. In case it be removed till it is just visible through the great fifty-four feet telescope of Lord Rosse, it is ascertained that the distance is so great that its light will take sixty thousand years to wing its flight to us. Remember, this is one solitary object—a single star. Suppose it were possible to gather up the constellation of Hercules, which is another universe somewhat like our own, and so near to us that by the aid of the ordinary instruments it is found to be composed of brilliant stars; let us move it backward and backward till the mighty eye of Lord Rosse's great telescope just loses sight of it. Where think you it will be? I am almost afraid to tell you the distance; it actually overwhelms the mind; it gives such an idea of infinity that

it seems impossible to comprehend it. Thirty millions of years will it require for the light to wing its flight before it can reach this earth.

Such are the distances we are permitted to penetrate into space. I have had the opportunity of examining a large number of these magnificent objects with one of the finest instruments ever mounted. We find among them every possible variety of form. We find these clusters sometimes in a globular figure, occasionally forming a ring of light, as the Milky Way, and, in short, in every possible fantastic shape imaginable; and still they are all governed by one law—all subject to the influence of gravitation, and their stability is perfect.

I have spoken of the distance of the stars. I intend now to carry you along with me and give you an idea of the *periods of motion* among these mighty objects. We know that the stars which compose our own system are not fixed, but are moving, and we have reason to believe that these remote objects are energized by the same principle. We find, moreover, these mighty clusters seem to be scattered through space not indifferently, but by a certain law. It is strange that a certain stream of them happens to occupy a position nearly perpendicular to the direction of the Milky Way itself. Now when we return home again and commence an examination of our own system, we have to start with more minute, smaller periods. We find among double stars some moving swiftly. In Hercules there is one whose motion is so perceptible that you can observe the change after a few nights. It performs its revolution in thirty-seven years only. There is another in the northern crown, which completes its revolution in forty-two years. Then we are carried by analogy still further, to the constellation of the Lion, where there is a quadruple set, formed by two sets of double stars: one of these revolves in one thousand and the other in two thousand years; and, inasmuch as the whole four are sweeping, by their proper motion, together through space in relative company, there is every reason to believe they constitute one system: and in case that be true, the motion of one of the double sets about the other can not be less than one million years. Thus immense are their periods; but what is this compared with the vast circuit of our sun itself.

In the course of lectures previously delivered in this city, I attempted to show to those who heard me how it was that Mädler had recently determined the central point in our great stratum, or the source about which all the stars, including our sun itself, are performing their mighty revolution. Now, although we can not rely implicitly upon all his deduc-

tions, yet that he has made a close approximation is certain; and in case we adopt his theory it requires our sun no less than one hundred and seventeen millions of years to complete its orbit about this grand centre. If then we desire to have the measure of eternity, it seems that it is possible almost to accomplish it even here in time. For let us suppose the hundred millions of suns to be united under the action of that Almighty power that started them in their orbits. They sweep on, and one hundred and seventeen millions of years roll round before the sun accomplishes his mighty journey. To bring them all back again to the same precise position, if the ratio is anything like what we suppose it to be, taking the single revolution of our own sun and solar system as our first unit, then indeed will we run round literally to infinity and throughout eternity itself, before we shall have accomplished one great revolution—one mighty year.

If there be anything, then, that can lead us upward to the contemplation of the attributes of Him who sustains all things by the might of his power, it is the understanding of his works above. If you would know his glory, examine the infinite number of mighty suns that blaze above us. Multiply the hundred millions with which we are associated, by the thousands of other systems beyond us, and compute the result. But again: If you would have an idea of the eternity past, call to mind the thought that all has existed so long. The objects which He has created we know to have existed millions of years ago; for we know with certainty that they must have been created thus early, else their light could not have traversed the mighty distance which separates us from them. And if we would have an idea of his omnipotence, let us remember that these mighty lights are but the expression of his will. Take our own little earth, which is now in comparison with the universe but a grain of sand; if all the inhabitants that ever moved on its surface could unite the sum of their physical strength into one arm, and that arm should attempt to project this earth, it could not move it through a single foot in a thousand years. Yet God has moved it sixty-eight thousand miles since I have been speaking. This is nothing. Remember this, that some almighty power is swinging, not only this earth, but all the planets of our system at the extremity of a radius of one hundred millions of millions of miles. And not only these, but the hundred millions of suns which cluster in our own system are performing their mighty revolutions. If there be not a conviction of Omnipotence here, then it is impossible for the human mind to comprehend it.

And we may go one step further. If we would have any idea of the omniscience of God, let us for a moment reflect that there is not a solitary particle of matter throughout the universe, that is not operating to disturb the movements of every other particle. The astronomer has shown the most transcendent genius, in computing the perturbation of a very few little bodies belonging to his own system. But God has computed the perturbation of every body in the entire universe, and he knows precisely how much influence is exerted by every one upon the other throughout the ceaseless ages of eternity. He knows full well that this mighty system, which he has calculated with infinite wisdom and skill, is so arranged that it shall be perpetual—that it shall never end.

PEACE SOCIETIES.

CIVILIZED nations are evidently for a season tired of war. The universality of the change is scarce less remarkable than its suddenness. Half a century ago the trumpet's martial peal resounded in all quarters of the globe. Citizens in those days, rejoicing in the name of volunteers, girded themselves for battle with an alacrity which evinced anything rather than a dislike to the terrific pastime. To talk of patriotism is all very well—of being compelled to don harness in self-defence—of being summoned to the battle-field by the pleading cries of sisters, children, and wives. The truth is, we required very little prompting; the spirit of the age was decidedly warlike, and in the language of *Mercutio, a la stoccatta*, carried it away. How then has it come about, that within so short a period, a reaction so decidedly beneficial has taken place almost simultaneously in every quarter of the globe—that, in reference to this momentous subject, public feeling should have undergone a change at once so complete, desirable, and sudden? To say that it has been effected by the humanizing influence of Christianity alone would be going too far. Christianity has done much—the diffusion of information and the spread of knowledge more strictly secular in its nature may have done something—the experience of the national benefit consequent upon the commercial intercourse of countries at peace may have contributed its share—but the universality of the moral revolution must, we are afraid, be traced to a much more obvious, though far less gratifying cause than any other we could specify. The fact is, mankind in general have become tired of war, just for the same reason that we of these

islands have got sick of poetry. Byron effected the latter change just as Napoleon accomplished the other. In both cases the thing was overdriven, and satiation has succeeded in begetting disgust.

Tired of war, men are now cultivating the sciences, studying politics, reading books and periodicals in which useful information and harmless amusement are delightfully combined. This, however, will not of itself prevent them eventually from relapsing anew into the military mania of other days; the old spirit will come back upon the world unless something much more effective is accomplished than that which the mere politician, philosopher, or sage, can at any time achieve. But it is obvious that the same cause which at present facilitates the spread of merely secular, facilitates also the diffusion of that more important learning by means of which, men, by becoming wise for eternity, become wise also for time. What then is the immediate duty of all who wish well to the best interests of the human race? Is it to waste time in merely guessing at the causes which have contributed to the change so often already specified? This would not be wise; it would be at least a very questionable expenditure of talents and of time. True philosophy teaches us, previous to an investigation of their origin, to take advantage of circumstances as they are. Now, one thing is certain, mankind have recently become fervent in their praise of peace; they are inclined to listen with attentive patience to any one who will take the trouble of discoursing to them on the subject; and the man who, possessing the ability, does not avail himself of the opportunity which this state of things affords to advance the interests of humanity by a judicious advocacy of the "cause of peace," proves himself, if a Christian at all, to be less wise in his generation than thousands whose pretensions are far less high. After these observations it is scarcely necessary to announce the decided pleasure with which we have recently witnessed the advantage which, in many parts of the world, genuine philanthropists and Christian patriots are taking of the improved tone of public sentiment and feeling in reference to the evils of war and the advantages of peace, to inculcate doctrines and deliver maxims calculated, if sincerely imbibed and followed up, to render permanent a change which, but for this, will assuredly prove equally fallacious and temporary.

Peace societies, our readers are aware, have been in existence for upward of thirty years. They started into organized being, both here and in Great Britain (and what is very singular, almost simultaneously), a little after the battle of Waterloo. They have since

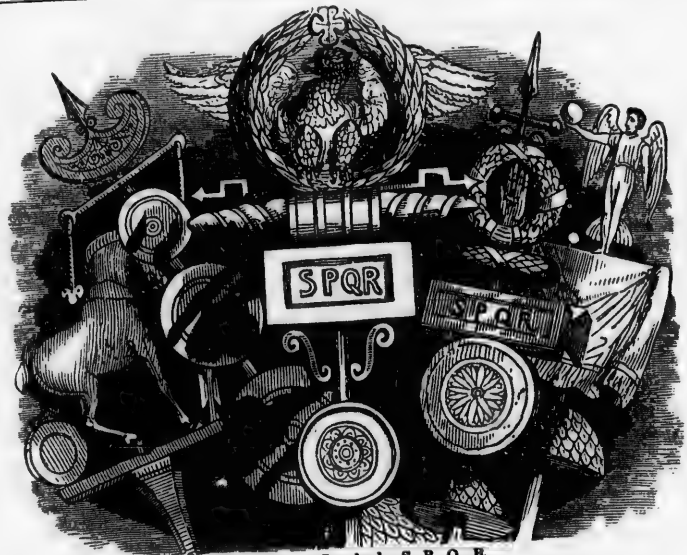
arisen in some quarters on the continent. Without attracting much notice, the members of these institutions prosecuted their philanthropic purpose for years; and they now have their reward; a tide of public approbation favorable to the grand object they are striving to promote, is fast setting in. To the United States of America is due the honor of the actual formation of the first society, and to the city of New York must be awarded the priority in this noble cause. A peace society was formed here in the year 1815, as also in Massachusetts and Ohio. The London society for the promotion of permanent and universal peace, was formally established about midsummer, 1816, exactly one year after the awful events at Waterloo. It had, however, been projected, and preliminary meetings had been held so early as 1814; but the continuance of the war, and the intoxication of national glory, appear to have impeded its public establishment. The meeting at which the formation of the London society was resolved on, was held at the house of William Allen, the eminent philanthropist and philosopher, lately deceased, in Plough Court, in the city of London. It is not uninteresting to observe the names of the twelve men who were then first appointed as the committee of the infant society. The committee consisted of the venerable and venerated Thomas Clarkson, his brother John Clarkson, William Allen, William Crawford, Charles Stokes Dudley, Thomas Harper, minister, Robert Marsden, Joseph Tregellis Price, Evan Rees, John Scott, Frederick Smith, and Thomas Sturge. Since the formation of this society in the United Kingdom, numerous associations have been formed for the same object. The number of tracts and publications printed by the society to the present time, is about two millions; and these tracts have been circulated in various languages, and in all the quarters of the globe. But by far the most important labor of the society, was the summoning of a convention of its friends from various parts of the world, in London, in 1843. The object of this convention was to deliberate upon the best means of showing to the world the evils of war, and of promoting peace. The number of delegates appointed was three hundred and twenty-four, of whom two hundred and ninety-two were from Great Britain and Ireland, twenty-six from the United States of America, and six from the continent of Europe. The convention lasted three days, and was attended by about one hundred and fifty of the delegates, besides a number of visitors, both ladies and gentlemen. The result of this convention has been to give an impetus to the cause greater than it ever before received. The friends of peace have been stimulated,

and fresh energy is infused into their operations. The number of publications and periodicals has been extended; lectures have greatly increased; and new auxiliaries are constantly making their appearance.

While, however, much good may have resulted from the agency employed by such institutions to circulate tracts and periodicals favorable to their views, we can not help thinking that one of the chief blessings society gains from them is the amount of influence exercised over the popular mind by the speeches delivered on occasion of their annual and other meetings. Tracts and magazines are all very well; we also decidedly approve of the advice given from so many quarters in reference to international addresses; but for producing a general sensation, there is nothing so effective as a good speech. Even the convention referred to, but for the eloquence of many of its public speakers, would have scarce achieved the triumphs it has subsequently gained. These speeches are not mere declamatory harangues, holding up war to detestation by a mere exhibition of its horrors; nor do they advocate peace merely from the temporary blessing it is inculcated to impart. Their tendency is to exhibit how utterly at variance with the principles of the gospel of Christ are the exercise or cultivation of those feelings in which war originates. Now this is what all along we would be at. We may no doubt advance many reasons against war and in favor of peace; but why should believers in a revelation from God not just begin at the beginning? Why not speak out with fearlessness and fidelity? Why not say that men are by nature lovers of war—that though, from the influence of the same causes that render men for a time tired of anything, the civilized human family are at present disposed to vote war a nuisance, they, notwithstanding, when the mood comes round, will be as much inclined for it as ever? If we be averse to war because we are better Christians than our forefathers, it is good; but if the feeling originate merely in being tired for a time of the game, it will not be lasting. Now, however, is the time for the Christian philanthropist to bestir himself. Christianity alone can render permanent a change which originated in a mere satiation of war as a trade. Let Christian ministers, therefore, bring the subject prominently before the minds of the hearers, giving distinct utterance to the truth, that, as the gospel of Christ recommends peace, so nothing but the same gospel can render peace permanent. A better moment than the present can not be supposed for the inculcation of such doctrines, appalled and agonized as we have been by the recent Mexican war. Let therefore as many meetings as possible be got

up for the purpose of bringing out the views of those who believe that mankind can only be kept from relapsing into their old martial propensities by the influence of genuine Christianity; for we can not conceal a suspicion that too little stress has been laid upon this view of things. To judge from the language which many use, we might almost fancy that human nature is improving of itself—that men are becoming peaceful, just through the diffusion of science and literature. Leviathan, alas, is not to be so easily tamed! They have read history to little purpose who are not aware that men naturally love to go to war; that they must have something to do—something to excite them; and that the mania of war will never yield to the mere influence of peace societies unless they recognise Christianity as the only system that can ultimately regenerate mankind. This, we are glad to discover, the members of peace institutions are almost universally doing; and this being the case, we must, in the use of our influence, bid them god-speed. What so desirable as peace—what so terrific as war! And yet, after all our experience of these, there is a principle in human nature which, unless checked by the gospel of peace, will again plunge us into all its horrors. There is, we again repeat, a danger that at present we mistake the mere lull of the storm for a permanent calm; that because men are clamorous for peace now they will be so always. Nothing can render us secure but the eradication of the principles in which war originates. This can be achieved by Christianity alone. Let it therefore be distinctly announced that such is the fact. Shilly-shallying, while it does good at no time, is utterly ruinous here. While the enemy sleeps let us endeavor to eradicate the tares. "Glory to God in the highest, peace on earth, and good will to men!" formed the burden of angelic song on the night of the birth of the Prince of Peace. The principles he taught, when universally embraced, will banish war from the earth; but nothing else will. Science, philosophy, art, may be cultivated while men are under the influence of a temporary satiation of the game of war; but these will never eradicate the principle. The tendency to war has its origin in elements with which the religion of Christ only can successfully grapple. This, we are glad to observe, is now distinctly recognised in the majority of the speeches delivered at peace meetings.

THE OBJECT OF EDUCATION.—The aim of education should be to teach us rather how to think than what to think—rather to improve our minds, so as to enable us to think for ourselves, than to load the memory with the thoughts of other men.



The Roman Standards, S. P. Q. R.

S. P. Q. R.

THE Romans bore on their standards the letters S. P. Q. R., meaning *Senatus Populus Que Romanus*. It has been adopted by certain religionists to express the following: *Serva populum quem redemisti*. An Italian, on entering Rome, applied it, *Sono poltroni questi Romani*. The protestants of Germany gave it, *Sublato papa quietum regnum*; the catholics, *Salus papa quies regni*. A wit, seeing it inscribed on the chamber wall of a pope, newly created, put this question to him, *Sancle Pater, quare rides?* The jocular head of the church answered by turning the letters the contrary way, *Rideo quia papa sum*.

WESTERN SCENERY.

THE traveller who first visits the valley of the west, advancing from the east to the Ohio river, and thence proceeding westward, is struck with the magnificence of the vegetation which clothes the whole surface. The vast extent and gloomy grandeur of the forest, the gigantic size and venerable antiquity of the trees, the rankness of the weeds, the

luxuriance and variety of the underbrush, the long vines that climb to the tops of the tallest branches, the parasites that hang in clusters from the boughs, the brilliancy of the foliage, and the exuberance of the fruit, all show a land teeming with vegetable life. The forest is seen in its majesty; the pomp and pride of the wilderness is here. Here is nature unspoiled, and silence undisturbed. A few years ago, this impression was more striking than at present; for now, farms, villages, and even a few large towns, are scattered over this region, diversifying its landscapes, and breaking in upon the characteristic wildness of its scenery. Still there are wide tracts remaining in a state of nature, and displaying all the savage luxuriance which first attracted the pioneer; and upon a general survey, its features present at this day, to one accustomed only to thickly-peopled countries, the same freshness of beauty, and the immensity, through rudeness of outline, which we have been accustomed to associate with the landscape of the west.

We know of nothing more splendid than a western forest. There is a grandeur in the immense size of the trees—a richness in the coloring of the foliage, superior to anything that is known in corresponding latitudes—a wildness and an unbroken stillness that attest the absence of man—above all there is a vastness, a boundless extent, an uninterrupted con-

tinuity of shade, which prevents the attention from being distracted, and allows the mind to itself, and the imagination to realize the actual presence and true character of that which had burst upon it like a vivid dream. But when the traveller forsakes the Ohio, and advancing westward ascends to the level of that great plain, which constitutes the surface of this region, he finds himself in an open champaign country—in a wilderness of meadows clad in grass, and destitute of trees. The transition is as sudden as complete. Behind him are the most gigantic productions of the forest—before him are the lowly, the verdant, the delicate inhabitants of the lawn; behind him are gloom and chill, before him are sunlight and graceful beauty. He has passed the rocky cliff, where the den of the rattlesnake is concealed, the marshes that sent up fetid steams of desolating miasma, and the cane-brake where the bear and the panther lurk; and has reached the pasture where the deer is feeding, and the prairie flower displays its diversified hues. He has seen the wilderness in all its savage pomp and gloomy grandeur, arrayed in the terrors of barbarian state; but now beholds it in its festal garb, reposing in peace, and surrounded by light gayety and beauty.

This distinction is not imaginary; no one can pass from one part of this region to another, without observing the natural antithesis of which we are speaking; and that mind would be defective in its perceptions of the sublime and beautiful, which did not feel, as well as see, the effect of this singular contrast. There is in the appearance of one of our primitive forests a gloomy wildness, that throws a cast of solemnity over the feelings; a something in the widespread solitude which suggests to the traveller that he is far from the habitations of man—alone, in the companionship of his own thoughts, and the presence of his God. But the prairie landscape awakens a different train of thought. Here light predominates instead of shade, and a variety of hue instead of a wearisome exuberance and monotony of verdure; while the extent of the landscape allows the eye to roam abroad, and the imagination to expand, over an endless diversity of agreeable objects.

The remarkable contrast is equally striking in the contour of the surface—in the difference between the broken and the level districts. If the traveller looks down from the western pinnacles of the Allegany, he beholds a region beautifully diversified with hill and dale, and intersected with rapid streams. In western Pennsylvania, Virginia, Kentucky, and Tennessee, he finds every variety of scenic beauty—the hill, the plain, the valley, the rocky cliff, the secluded dell, the clear foun-

tain, and the rivulet dashing headlong over its bed of rock. The rivers have each their characteristic scenery. The Monongahela winding through a mountainous country, overhung with precipices, and shaded by heavy forests, with a current sufficiently gentle to be easily navigable to steamboats, has its peculiar features, which are instantly lost when the traveller has passed on the bosom of the Ohio. The winding course and picturesque scenery of the Ohio, between Pittsburgh and Wheeling, impress the beholders as strictly wild and beautiful; below the latter place, the feature of the landscape become softened, the hills recede further from the river, are lofty, and more rounded; and again, after passing Louisville, these elevations are seen less frequently, and gradually melt away, until the river becomes margined by low shores, and one continuous line of unbroken forest. But if we leave the gentle current of the Ohio, and ascend the Kentucky or the Cumberland, we again find rapid streams, overhung with precipices, and a country abounding in the diversities of a wild and picturesque scenery. Here may be seen the rapid current foaming and eddying over beds of rock, and the tall peak towering above in solitary grandeur. Here the curious traveller may penetrate the gloom of the cavern, may clamber over precipices, or refresh himself from the crystal fountain bursing from the bosom of the rock. But he will find every hill clad with timber, every valley teeming with vegetation; even the crevices of the limestone parapets giving sustenance to trees and bushes.

The scenery presented on the western shore of the Ohio is altogether different. The mountain, the rock, the precipice, and limpid torrent, are seen no more; and the traveller, as he wanders successfully over Indiana, Illinois, Missouri, and the vast wilderness lying beyond, is astonished at the immensity of the great plain, the regularity of its surface, and the richness, the verdure, the beauty, of its widespread meadows.

It is, perhaps, not easy to account for the intense curiosity and surprise which have been universally excited by the existence of these plains; for they have been found in various parts of the world. The steppes of Asia, the pampas of South America, and the deserts of Africa, are alike destitute of timber. But they have existed from different causes; and while one has been found too arid and sterile to give birth to vegetation, and another snow-clad and inhospitable, others exist in temperate climates and exhibit amazing fertility of soil. These facts show that there are various causes inimical to the growth of the trees, and the forest is not necessarily the spontaneous product of the earth, and its natural covering,

underbrush, the tops of the tallest trees, in clusters of the foliage, all show a life. The forest is nature undisturbed. A few years ago, striking than at present, and even over this region, and breaking in places of its scenery. Remaining in a state of the savage luxuriance of the pioneer; and the features present at only to thickly-reshness of beauty in accustomed to of the west.

so splendid than a grandeur in the richness in the prior to anything of the latitudes—a stillness that attest all there is a vast-uninterrupted con-

wherever its surface is left uncultivated by the hand of man. The vegetable kingdom embraces an infinite variety of plants, "from the cedar of Lebanon to the hyssop that groweth on the wall;" and the plan of nature, in which there is no miscalculation, has provided that there shall be a necessary concatenation of circumstances—a proper adaptation of soil, climate, moisture—of natural and secondary causes, to produce and to protect each: just as she has assigned the wilderness to the Indian, the rich pasture to the grazing herd, and the Alps to the mountain goat.

We apprehend that the intense astonishment with which the American pioneers first beheld a prairie, and which *we all* feel in gazing over those singularly beautiful plains, is the result of association. The adventurers who preceded us, from the champaign districts of France, have left no record of any such surprise; on the contrary, they discovered in these flowery meadows something that reminded them of home; and their sprightly imaginations at once suggested, that nothing was wanting but the vineyard, the peasant's cottage, and the stately chateau, to render the resemblance complete. But our immediate ancestors came from lands covered with wood, and in their minds the idea of a wilderness was indissolubly connected with that of a forest. They had settled in the woods upon the shores of the Atlantic, and there their ideas of a new country had been formed. As they proceeded to the west, they found the shadows of heavy foliage deepening upon their path, and the luxuriant forest becoming at every step more stately and intense, deepening the impression, that as they receded from civilization, the woodland must continue to accumulate the gloom of its savage and silent grandeur around them—until suddenly the glories of the prairie burst upon their enraptured gaze, with its widely-extended landscape, its verdure, its flowers, its picturesque groves and all its exquisite variety of mellow shade and sunny light.

Had our English ancestors, on the other hand, first settled upon the plains of Missouri and Illinois, and the tide of emigration were now setting toward the forests of Ohio and Kentucky, climbing the rocky barriers of the Allegany ridge, and pouring itself down upon the wooded shores of the Atlantic, the question would not be asked how the western plains became denuded of timber, but by what miracle of Providence, a vast region had been clothed, with so much regularity, with the most splendid and gigantic productions of nature, and preserved through whole centuries from the devastations of the frost and the fire, the hurricane and the flood. We have all remarked how simple and how rapid is the

process of rearing the annual flower, or the more hardy varieties of grass, and with what ease a spot of ground may be covered with a carpet of verdure; and we know equally well how difficult it is to rear an orchard or a grove, and how numerous are the accidents which assail a tree. An expanse of natural meadow is not therefore so much an object of curiosity, as a continuous forest; the former coming rapidly to perfection, with but few enemies to assail it, the latter advancing slowly to maturity, surrounded by dangers. Hence there is to my mind no scene so imposing, none which awakens sensations of such admiration and solemnity, as the forest standing in its aboriginal integrity, and bearing the indisputable marks of antiquity—where we stand upon a soil composed of vegetable mould, which can only have been produced by the undisturbed accumulation of ages, and behold around us the healthful and gigantic trees, whose immense shafts have been increasing in size for centuries, and which have stood during that whole time exposed to the lightning, the wind, and the frost, and to the depredations of the insect and the brute.

The scenery of the prairie country excites a different feeling. The novelty is striking, and never fails to cause an exclamation of surprise. The extent of the prospect is exhilarating; the verdure and the flowers are beautiful; and the absence of shade, and consequent appearance of a profusion of light, produce a gayety which animates the beholder.

It is necessary to explain that it is not, although preserving a general level in respect to the whole country, are yet in themselves not flat, but exhibit a gracefully-waving surface, swelling and sinking with an easy slope, and a full rounded outline, equally avoiding the unmeaning horizontal surface, and the interruption of abrupt or angular elevations. It is that surface which, in the expressive language of the country, is called *rolling*, and which has been said to resemble the long heavy swell of the ocean, when its waves are subsiding to rest after the agitation of a storm.

It is to be remarked also, that the prairie is almost always elevated in the centre, so that in advancing into it from either side, you see before you only the plain, with its curved outline marked upon the sky, and forming the horizon, but on reaching the highest point, you look around upon the whole of the vast scene.

The attraction of the prairie consists in its extent, its carpet of verdure and flowers, its undulating surface, its groves, and the fringe of timber by which it is surrounded. Of all these, the latter is the most expressive feature—it is that which gives character to the land-

scape, which imparts the shape and marks the boundary of the plain. If the prairie be small, its greatest beauty consists in the vicinity of the surrounding margin of woodland, which resembles the shore of a lake, indented with deep vistas like bays and inlets, and throwing out long points, like capes and headlands; while occasionally these points approach so close on either hand, that the traveller passes through a narrow avenue or strait, where the shadows of the woodland fall upon his path, and then again emerges into another prairie. Where the plain is large, the forest outline is seen in the far perspective like the dim shore when beheld at a distance from the ocean.—The eye sometimes roams over the green meadow, without discovering a tree, a shrub, or any object in the immense expanse, but the wilderness of grass and flowers; while at another time, the prospect is enlivened by the groves which are seen interspersed like islands, or the solitary tree, which stands alone in the blooming desert.

If it be in the spring of the year, and the young grass has just covered the ground with a carpet of delicate green, and especially if the sun is just rising from behind a distant swell of the plain, and glittering upon the dewdrops, no scene can be more lovely to the eye. The deer is seen grazing quietly upon the plain; the bee is on the wing; the wolf with his tail dropped is sneaking away to his covert with the felon-tread of one who is conscious that he has disturbed the peace of nature; and the grouse feeding in flocks or in pairs, like the domestic fowl, cover the whole surface—the males strutting and erecting their plumage like a peacock, and uttering a long, loud, mournful note, something like the cooing of the dove, but resembling still more the sound produced by passing a rough finger boldly over the surface of a tamborine. The number of these birds is astonishing. The plain is covered with them in every direction; and when they have been driven from the ground by a deep snow, we have seen thousands—or more properly tens of thousands—thickly clustered in the tops of the trees surrounding the prairie. They do not retire as the country becomes settled, but continue to lurk in the tall grass around the newly-made farms; and we have sometimes seen them mingled with the domestic fowls, at a short distance from the farmer's door. They will eat and even thrive when confined in a coop, and may undoubtedly become domesticated.

When the eye roves off from the green plain to the groves or points of timber, these also are found to be at this season robed in the most attractive hues. The rich undergrowth is in full bloom. The red-bud, the dog-wood, the crab-apple, the wild plumb, the cherry,

the rose, are abundant in all rich lands; and the grape-vine, though its bloom is unseen, fills the air with fragrance. The variety of the wild fruit and flowering shrubs is so great, and such the profusion of the blossoms with which they are bowed down, that the eye is regaled almost to satiety.

The gayety of the prairie, its embellishments, and the absence of the gloom and savage wildness of the forest, all contribute to dispel the feeling of lonesomeness, which usually creeps over the mind of the solitary traveller in the wilderness. Though he may not see a house nor a human being, and is conscious that he is far from the habitations of men, he can scarcely divest himself of the idea that he is travelling through scenes embellished by the hand of art. The flowers, so fragile, so delicate, and so ornamental, seem to have been tastefully disposed to adorn the scene. The groves and clumps of trees appear to have been scattered over the lawn to beautify the landscape, and it is not easy to avoid that decision of the fancy which persuades the beholder, that such scenery has been created to gratify the refined taste of civilized man. Europeans are often reminded of the resemblance of this scenery to that of the extensive parks of noblemen: which they have been accustomed to admire in the old world; the lawn, the avenue, the grove, the copse, which are there produced by art, are here prepared by nature; a splendid specimen of massy architecture, and the distant view of villages, are alone wanting to render the similitude complete.

In the summer the prairie is covered with long coarse grass, which soon assumes a golden hue, and waves in the wind like a ripe harvest.—Those who have not a personal knowledge of the subject would be deceived by the accounts which are published of the heights of the grass. It is seldom so tall as travellers have represented, nor does it attain its highest growth in the richest soil. In the low wet prairies, where the substratum of clay lies near the surface, the centre or main stem of this grass, which bears the seed, acquires great thickness, and shoots up to the height of eight or nine feet, throwing out a few short, coarse leaves or blades, and the traveller often finds it higher than his head as he rides through it on horseback. The plants, although numerous, and standing close together, appear to grow singly and unconnected, the whole force of the vegetative power expanding itself upward. But in the rich undulating prairies, the grass is finer, with less of stalk, and a greater profusion of leaves. The roots spread and interweave so as to form a compact even sod, and the blades expand into a close thick sward, which is seldom more than

eighteen inches high and often less, until late in the season when the seed-bearing stem shoots up.

The first coat of grass is mingled with small flowers; the violet, the bloom of the strawberry, and others of the most minute and delicate texture. As the grass increases in size these disappear, and others, taller and more gaudy, display their brilliant colors upon the green surface, and still later a larger and coarser succession rises with the rising tide of verdure. A fanciful writer asserts, that the prevalent color of the prairie-flowers is in the spring a bluish purple, in midsummer red, and in the autumn yellow. This is one of the notions that people get, who study nature by the fireside. The truth is, that the whole of the surface of these beautiful plains is clad throughout the season of verdure with every imaginable variety of color, "from grave to gay." It is impossible to conceive a more infinite diversity, or a richer profusion of hues, or to detect any predominating tint, except the green, which forms the beautiful ground, and relieves the exquisite brilliancy of all the others. The only changes of color observed at the different seasons arise from the circumstance that in the spring the flowers are small and the colors delicate; as the heat becomes more ardent a hardier race appears, the flowers attain a greater size, and the hue deepens; and still later a succession of coarser plants rise above the tall grass, throwing out larger and gaudier flowers. As the season advances from spring to midsummer, the individual flower becomes less beautiful when closely inspected, but the landscape is far more variegated, rich, and glowing.

In the winter, the prairies present a gloomy and desolate scene. The fire has passed over them, and consumed every vegetable substance, leaving the soil bare, and the surface perfectly black. That gracefully waving outline which was so attractive to the eye when clad in green, is now disrobed of all its ornaments; its fragrance, its notes of joy, and the graces of its landscape, have all vanished, and the bosom of the cold earth, scorched and discolored, is alone visible. The wind sighs mournfully over the black plain; but there is no object to be moved by its influence—not a tree to wave its long arms in the blast, nor a reed to bend its fragile stem—not a leaf nor even a blade of grass to tremble in the breeze. There is nothing to be seen but the cold dead earth and the bare mound, which move not—and the traveller with a singular sensation, almost of awe, feels the blast rushing over him, while not an object visible to the eye, is seen to stir. Accustomed as the mind is to associate with the action of the wind its operation upon surrounding objects, and to see

nature bowing and trembling, and the fragments of matter mounting upon the wind as the storm passes, there is a novel effect produced on the mind of one who feels the current of air rolling heavily over him, while nothing moves around.

CONNEXION BETWEEN COMMERCE AND INTELLECTUAL EMINENCE.

BY ARCHIBALD ALISON, THE HISTORIAN.

THERE is a natural connexion which has made itself manifest in every age, between commerce and intellectual eminence; and the greatest steps in human improvement, the greatest marvels of human exertions, have arisen from their combination. It was to the commercial city of Tyre that we owe the invention of letters—that wonderful and almost superhuman discovery, which first gave permanence to the creations of thought, and sends forth the "winged words," of genius, to make the circuit of the globe, and charm while it endures. It was its fortunate situation on the highway from Asia to Europe, since reopened by British enterprise, which gave its early celebrity and enduring fame to ancient Egypt; and we owe to the caravans of the desert, more even than to the power of the Pharaohs, those wonderful structures, the pyramids of Cairo, and temples of Luxor, which after the lapse of four thousand years, still stand "erect and unshaken above the floods of the Nile."

Rome herself, the mistress of the world, owed her vast and enduring domination mainly to the energies of commerce; and we have only to cast our eyes on the map, and behold her provinces clustered round the waters of the Mediterranean to be convinced that more even than to the arms of the legions, her power was owing to the strength of the maritime cities which glittered along its shores. It was the caravans of the desert which raised those wonderful structures which still, at Tadmor and Palmyra, attest the magnificence of the queen of the east, and attract the admiration of the European traveller. It was in commercial Alexandria that alone a library was formed, worthy of the vast stores of ancient knowledge; and when the dominion of the consuls had fallen, and the arm of the Roman could no longer defend Italy from the swords of the barbarians, the incomparable situation and commercial greatness of Constantinople perpetuated, for a thousand years longer, on the frontier of barbarian wilds, the empire of

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the east. Nor has commerce in modern times fallen from her high vocation, as the chief spring of social improvement, and most powerful humanizer of man. It was in the manufacturing city of Florence that a rival was found in Danté, to the genius of ancient poetry; in the mercantile city of Venice that painting rose to its highest lustre on the canvas of Titian. Genoa sent forth that daring spirit, which first burst the boundaries of ancient knowledge, and exposed to European enterprise the wonders of another hemisphere.

It was in Lisbon that there was at once found, in Vasco de Gama, the courage to brave the cape of Storms, and open the ocean path to the regions of the east, and the genius of Camoens to celebrate the glorious enterprise, and for ever enshrine it in the hearts of men. Great as these achievements are, there are yet greater things than these. It is in the north that the chief triumphs of the alliance between commerce and intellect are to be found. To one commercial city of Germany we owe the art of printing—to another the reformation. The first has rendered certain the diffusion of knowledge, the last, impossible the slavery of thought. Painting has again, in the north, reached its highest perfection in a commercial city—in Antwerp, where the immortal genius of Vandyke and Rubens was exhibited. Commerce in Holland achieved a glorious victory alike over the storms of nature, and the oppressions of man. But why should we travel to other times, and distant lands, for a confirmation of the same eternal truth. In this age, in this country, in this city, its highest glories have been found. Here it was, and here alone, that a successful stand was at last made against the aggressions of revolutionary France; it was the discoveries of Watt, of Arkwright, and of Crompton, which arrayed the forces that the arms of Napoleon were unable to subdue. It was a company of British merchants which subjected the vast realms of Hindostan to the sceptre of Queen Victoria, and exhibited the prodigy of a single *Delhi Gazette*, announcing in one day the capture of Cabool, in the heart of Asia, and the submission of the celestial empire under the walls of Nankin. It is the energy of British commerce which has peopled the western hemisphere with our descendants, and is spreading through the eastern archipelago, the wonders of European art and the blessings of Christian civilization. Hitherto the progress of improvement has ever been from east to west: from the rising to the setting of the sun; but the merchants of England, have, for the first time in the history of the world, rolled back the tide of civilization to its source, and returned its blessings to the regions of the sun.

THE number of human beings on the earth is calculated at nearly one thousand millions: all these are fed from the produce of the ground; for even animal food is itself the produce of the ground. It is true that, for this result, man in general must labor; but how small an actual portion of this immense productiveness is due to man! His labor ploughs the ground, and drops the seed into the furrow. From that moment a higher agency supersedes him. The ground is in possession of influences which he can no more guide, summon, or restrain, than he can govern the ocean. The mighty alembic of the atmosphere is set at work; the rains are distilled, the gales sweep, the dews cling, the lightning darts its fertilizing fire into the soil, the frost purifies the rapidity of the fermenting vegetation—perhaps a thousand other agents are in movement, of which the secrets are still hidden from man, but the vividness of whose force penetrates all things, and the extent of whose action is only to be measured by the globe; while man stands by, and has only to see the naked and drenched soil clothing itself with the tender vegetation of spring, or the living gold of the harvest; the whole loveliness and bounty of nature delighting his eye, soliciting his hand and filling his heart with joy.

But the wonder does not come to its limit with the provision for man; the forest, the field, the mountain, the shore, are all peopled with eager existence. The world is all life. The quadruped millions range freely, and are fed abundantly, in regions into which man never struck a spade. We speak of things of common knowledge. The buffalo ranges in herds of thousands in realms of the New World, to which man has yet scarcely given a name. In Africa, the casual migration of the antelope has displayed such myriads that they have been compared to the movement of a great army. The elephant in eastern Africa, is almost master of the land.

Who feeds those millions? They can produce nothing for themselves. But their table is spread upon the ground; and their provision is perpetual. If the tempest ravages it, or the sun scorches, or the frost smites, they are led by instinct, the invisible hand of Providence, to another soil; and still the land furnishes their inexhaustible food.

But the support of man and the quadruped races is but a portion of this wondrous productiveness. The millions of the reptile tribes, the millions of millions of the insect tribes, are all to be fed from the ground.

Another race then comes into view equally fed from land and ocean—the fowls of the air. No grasp of numeration can calculate their

multitudes. The migration of a single tribe—the wood-pigeons of the North American forests—has covered the sky with a column of flight, a living cloud, ten miles long and a mile broad. In some instances the migration is said to have lasted for days, continually darkening the sky. Such numbers defy all counting; yet they are all fed from the produce of the ground. Even the birds of prey, and the sea-birds, are fed from that which was originally the produce of the ground.

It is computed that the land of the globe would be equal to the support of fifteen times the number of its present inhabitants, or might sustain a population of fifteen thousand millions. But the ocean, three times the extent of the land, probably contains even a much larger proportion of life, from its being penetrable, through all its depths; and from our knowledge, not merely of its surface, but from the strong probability, amounting almost to certainty, that the mountains and valleys of its bed are filled with vegetation, fed on by those monstrous animals whose skeletons we so constantly find embedded, and thus preserved in soils once evidently covered by the sea. There probably exist millions of those huge creatures, no more capable of ascending to the surface of the ocean than man to the surface of the atmosphere, yet enjoying their existence, grazing in their submarine forests and prairies, ranging through an extent of pasture to which the broadest regions of the land are tame and narrow: and, undisturbed by the hostility or the molestation of man, giving in their provision and their enjoyment proofs, to higher than mortal eyes, of the spontaneous and boundless beneficence of their Creator.

MASSACHUSETTS STATEHOUSE.

This elegant and spacious edifice, situated in Boston on elevated ground adjoining the common, and near the centre of this ancient and flourishing city, was erected in 1795. The corner-stone was laid on the fourth of July, by the venerable and patriotic Samuel Adams, then chief magistrate of Massachusetts (assisted by Paul Revere, master of the grand lodge of masons). He succeeded Governor Hancock, who died in October, 1793.

The lot was purchased by the town of Boston of the heirs of Governor Hancock, at four thousand dollars. The building was not finished and occupied by the legislature till January 1798; when the members of the general court walked in procession from the old statehouse at the head of State street, and the new edifice was dedicated by solemn prayer to Al-

mighty God. The old statehouse, so called from the time of building the other, was long the place in which the general court of the province of Massachusetts Bay was held. It has lately been well repaired, and is the place of the meetings of the city authorities and for public offices.

The corner-stone of the present statehouse was brought to the spot by fifteen white horses, at that time the number of states in the Union. The building is seen at a great distance in all directions, and is the principal object visible when the city is first seen by those who visit it. The form is oblong, being one hundred and seventy-three in front, and sixty-one feet deep. The height of the building, including the dome is one hundred and ten feet; and the foundation is about that height above the level of the water of the bay. "It consists externally of a basement story, twenty feet high, and a principal story, thirty feet high. This, in the centre of the front, is covered with an attic sixty feet wide, and twenty feet high, which is covered with a pediment. Immediately above rises the dome, fifty feet in diameter, and thirty in height; the whole terminating with an elegant circular lantern, which supports a pine cone. The basement story is finished in a plain style on the wings, with square windows. The centre is ninety-four feet in length, and formed of arches which project fourteen feet, and make a covered walk below, and support a colonnade of Corinthian columns of the same extent above.

The largest room is in the centre, and in the second story, and is occupied as the representatives' chamber: it will accommodate five hundred members. The senate chamber is also in the second story and at the east end of the building, being sixty feet by fifty. On the west end is a large room for the meetings of the governor and the executive council; with a convenient ante-chamber.

The view from the top of the statehouse is very extensive and variegated; perhaps nothing in the country is superior to it. To the east appears the bay and harbor of Boston, interspersed with beautiful islands; and in the distance beyond, the wide extended ocean. To the north the eye is met by Charlestown, with its interesting and memorable heights, and the navyyard of the United States; the towns of Chelsea, Malden, and Medford, and other villages, and the natural forests mingling in the distant horizon. To the west, is a fine view of the Charles river and bay, the ancient town of Cambridge, rendered venerable for the university, now two centuries old; of the flourishing villages of Cambridgeport and East Cambridge, in the latter of which is a large glass-manufacturing establishment: of the highly-cultivated towns of

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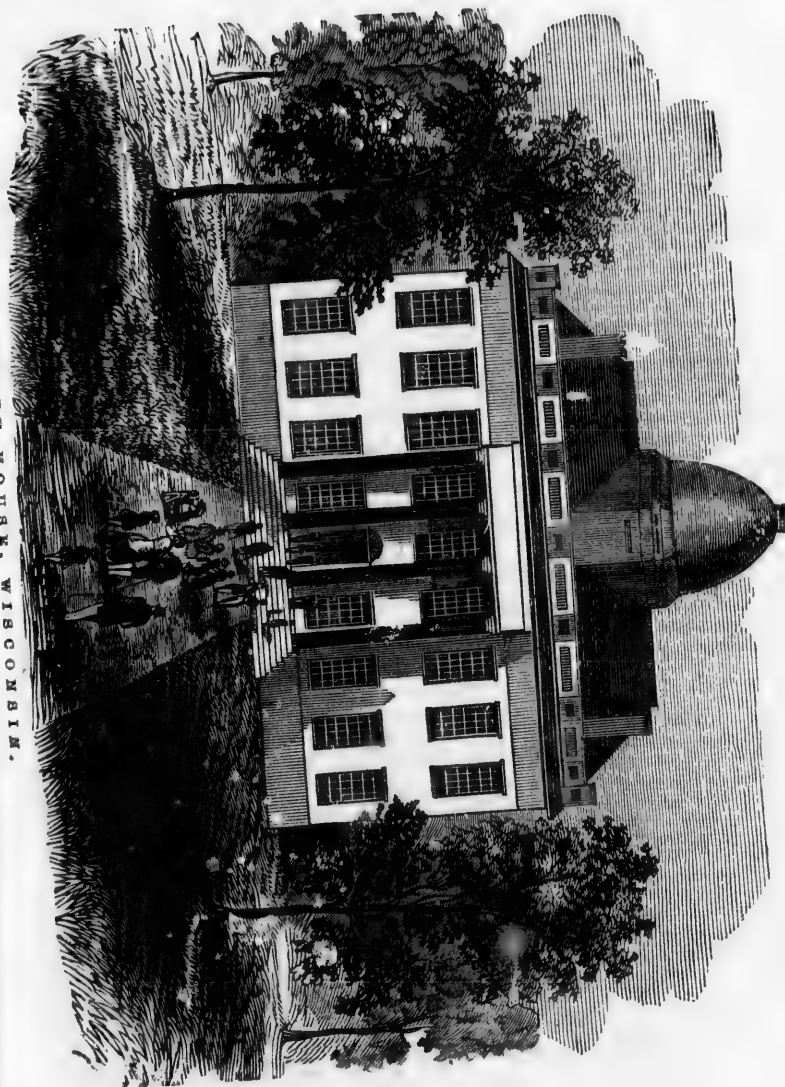
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Brighton, Brookline, and Newton; and to the south is Roxbury, which seems to be only a continuation of Boston, Dorchester, a fine, rich, agricultural town, with Milton and Quincy beyond, and still further south, the Blue hills, at the distance of eight or ten miles, which seem to bound the prospect.

THE SONS OF THE OCEAN.

As men in every station and condition of life, generally fall into particular divisions, a seafaring life admits of an arrangement of captains of vessels in three classes, distinct in their character from each other. There are, among sea-captains, as in all other kind of business, men who, from vocation and inclination, and others, who, by chance, or a whim of fate, follow the sea; and others, again, who enter this path, because no other remains open to them. For the designation of these three classes, particular generic names are necessary, which we shall here make use of for that purpose. There are, among ship-captains, seamen, captains, and skippers. The seaman feels himself born for the ocean, and however the circumstances of his childhood may shape themselves, he wears out his boy's shoes upon ship's deck, and already, while a boy, obtains, in a manner, an elevated view of life and of the world, from the mainmast top, where his commander sends him in storm and tempest. Accustomed to the adverse elements, deprived of tranquillity and comfort, his moral powers are developed by difficulties and dangers. Courage in him is moral self-reliance, and manifests itself as strength of mind, in perseverance and endurance, in self-denial and privation. This courage of the seaman has nothing in common with the so-called "courage" of the mercenary, which, for a few pence, he manifests, as the blind, willess instrument of absolute despotism. The seaman passes through all grades of service, from cabin-boy to commander, and reports himself in every station and situation, as a born seaman. The ocean is his element; the storm is his companion; the universe his world; and the central point of his life, his ship. The seaman, in his place as captain, regards the ocean as his home, his cabin as his dwelling, his quarterdeck as his promenade, his vessel as a part of his own being. The seaman on shore, longs to be on board again, as the youth longs for his beloved; all his thoughts and cares hover round his vessel. In conversation on different subjects, he is all the while thinking of his ship, and loves to talk of nothing so much as of the dangers he has gone through. He regards his vessel with

pride, when he is leaving or returning to it; "it is the joy of his stormy life." The retired loneliness and the deep reflection which are at all times peculiar to his situation, develop in the seaman that depth of contemplation which regards life, from an elevated position, in accordance with the unconscious result of his nautical studies, which lead him into the boundless domain of astronomy. He considers our planet as an imperfect, insignificant thing, in mathematical relation, to other planets—the universe, as a region of eternal motion, where solar systems revolve around other solar systems. In such contemplations of creation (forced upon him, so to speak, by his calling), he feels the nothingness of earthly life, while he recognises the dignity of the human mind. As a spirit in a body of clay, he is able to fix the point of his momentary existence upon the ocean, with more or less precision. Conversant with the orbits of the stars, he arrives at the elevated degree of calculating by seconds the distances of constellations, whose motions are as familiar to him as the course of his own ship. Through mathematical demonstration, faith becomes in him the conviction that a higher power exists, which directs the universe, and reveals itself upon our planet, through its works as nature, and governs the tides—the breathing of the ocean, under the influence of the moon; the pulse-throb of a mysterious life. Opposed to the grandeur of the universe, worldly brilliancy appears to him in its insignificant nothingness, while his spirit feels itself allied with the all-governing primitive power, which reveals itself in the daring elevation of human intellect, calculating the rotation of the constellations. He is emboldened to follow the path of a comet—to enter the realms of infinitude; and shrinks back, with holy awe, before the impenetrable mystery of the magnet.

The seaman treats his crew as men, and his officers as friends. Not forgetting that he has been a sailor himself, and borne the toils and hardships before the mast, he endeavors to lighten the lot of his crew. He observes a rigid fulfilment of his duties as captain, while he requires from each man equal exactitude in service, and equal respect as a man, on all occasions, and at all times. Beholding in his officers men who may become to-morrow what he is to-day, he treats them as he desired to be treated by his commander when in a similar position. More accustomed to thinking than to talking, the seaman is laconic in his discourse, and likes, least of all, the obtrusive speeches and far-fetched questions of tedious passengers, which are as strange to him as are life and the world to them.

If accident brings him in contact with a man

in whom he finds a harmony with his own feelings, whether it be with a passenger on board, or in social intercourse on shore, the polar crust of ice which encloses his heart easily melts, and his inward nature opens, under the reciprocal attraction, to unrestrained communion. Bountiful and generous, without extravagance, in his intercourse on shore, he displays his peculiar qualities in hospitality on board his ship. He relinquishes the details of providing for the crew to those whose office involves this duty, while he gives his particular attention to the supplying of pure water and sufficient stores. The instruments and charts required by his vocation, are especially dear to him, and his possessions of this sort approach to a luxury which he displays in nothing else.

In his toilet he is neat and cleanly, as well as in his ship. He is less observant of the changes of fashion when on shore, but takes care to have a wardrobe suitable to the variations of climate. He is fond of reading on board, and keeps on increasing a little cabinet library, though few authors serve him; he likes only those that "sail deep," and carry rich cargoes. At sea, he longs to see his voyage speedily ended; on shore, he wishes himself at sea again. His manly character is not only evinced in imminent danger, but more especially by his equanimity and patience in calms and other hindrances. Familiar with the dangers of the element from his youth up, he becomes equally familiar with the thoughts of death, with which he is threatened by every cloud that disturbs the horizon, and which may bring about his last hour. Although attached to life by the bonds of love and friendship, he does not fear death in the moment of danger. Feeling the responsibility which rests upon him, by having the lives of other men confided to his charge, who are placed under his unrestricted authority, and who, in a measure, are all involved in his fate, within a limited space, are in dependence upon him, he maintains his firmness and presence of mind in decisive and critical moments. Without expecting miracles of a supernatural character, where human help fails, he sustains himself as a man, upon the elevation of strength of mind, the greatest miracle on earth, since "man, revealed in the seaman," dares to brave and contend against the destructive power of the elements; "a worm of the dust" floating upon the raging ocean, allied, as spirit, to the primitive power, whose breath pervades all nature, and roars in the storm and the hurricane.

In churchyards and burial-places, we seldom see the memorial of a seaman. Born on the seashore—as a boy, growing up on board—as a youth, only on shore to go to sea again—the

seaman, for the most part, ends his life in the waves—whereby the owners lose nothing, because ship and cargo are insured. The ocean on which his life was developed, most generally becomes his grave, and the storm which raged about his path, and proved his courage and hardihood, becomes the only witness of his death-hour. But storm and tempest, raging above him in his last moments, offer no organ of renown. The murmur of the waves tells not to his people the last struggles of the seaman. No whispering of the billows in a calm, on the shore of his home, brings his last farewell to the objects of his affection, nor the last sigh, which, in the dismal distance of the raging elements, or within sight of the coast of his destination, is lost amid the howling of the storm, and the roaring of the breakers in whose companionship death embraces him. The fury of the tempest which caused his end, closing his bursting eyes in eternal night, and his heart in everlasting silence, is appeased, and has died away. The subbeams which tanned the seaman's cheek, shines upon no flower, sparkles in no dew-drop, upon the grassy sod of the seaman's grave. His fame disappears as tracklessly as the wake which he leaves behind him in circumnavigating the globe, while his name lives in the recollection of kindred hearts, which knew and acknowledged him in his worth, as a man. This is the "seaman," developed in struggles, braving every danger, in the consciousness of his mental power and manly dignity.

Opposed to the seaman, we see the "skipper." The skipper has entered upon a seafaring life, because he was good for nothing on shore; he ran away from his apprenticeship to a tailor, and was not strong enough for a blacksmith or carpenter. He sails ten years before the mast, and at length becomes mate, because there is no one else who can write the account in a table of reckoning, and call "stop!" when casting the log. He arrives, in twelve years, as second mate, so far that he can keep a "log-book," and come tolerably near the latitude by means of the sextant, when the horizon is not too uncertain, or the ship too "crank." At length he finds a captain who makes him first mate, and keeps him in his employ for years because he is as stupid as himself, and tolerates him because he, as mate, takes no notice of the captain's blunders. He becomes captain by his good name as a manager, by his marriage with a widow, by the caprice of an old woman, by the death of a captain, or by the influence of a sister or niece in the service of a merchant, and gets a ship, to repair the rigging, patch the sails, and take a crew over the sea on the "starving system." Having completely fulfilled the expectations of the stingiest of owners in this

respect, a better vessel, with a more numerous crew, is confided to his "hunger cure." He is now captain, and remains so, and lays up money, that he may retire as soon as possible. He traffics and cheats on board and on shore, and sells his own clothes to a sailor, in payment of his monthly wages. Instead of the "Nautical Almanac," he carries an old low Dutch reckoning book. He knows nothing of the distances of the constellations, and has no acquaintance with any star in the heavens but the evening star, which once caught his attention, because it sparkled alone. He carried no chronometer, for he does not know how to use it. On a long course, he relies upon the accidental meeting of a ship which knows the longitude, and then boasts to his mate of his precision, if he has not made a mistake of more than seven degrees. He treats his crew like slaves, and his officers like servants; drinks a glass of wine or grog himself, but enjoins "temperance" upon all besides, for he maintains that "spirits and much meat are real poison at sea." The provisions are given out to the crew in his presence, and he strictly controls the weight. If the ration is short by a half pound, he thinks it is "very well! the next time more can be given." His favorite seat is the water butt, upon the afterdeck, where he observes the clouds. The least unfavorable change in the wind sets his blood in a ferment, and in a contrary wind, or even in a calm, he loses his senses; he raves about like a madman, looks up the cabin-boy, to find some fault with him, and seizes the nearest rope to cool his wrath upon him. If the wind becomes favorable, he chats with the man at the helm and with the cook, and promises the mate his influence to procure him a ship. In the neighborhood of the coast, he is thrown into a fever of anxiety, because he does not know where he is; he climbs the mast ten times a day, and insists that a sailor must see land where there is none. If he should, at length find a pilot-boat, he gets intoxicated with joy, gives over his ship to the pilot, and lays himself down in his berth.

On land he is a sea-hero, and relates miracles of his ability as a seaman. He is fond of associating with the captains with whom he once sailed before the mast, and allows himself to be treated by them at the ship-chandler's and at hotels. As the time approaches for him to put to sea again, he becomes cross and discontented, for he fears the sea "as a miserable sinner does the devil." He keeps no mate with him for more than one voyage, and no sailor will hire with him who has ever met with any one who has sailed with him before. He cheats his owners, and knows how to save, in provisions and in

the inventory, for them and for himself, and retains their good opinion of him as an "able captain." When he has raked money enough together, he retires to repose, and becomes a grocer or tavern-keeper in the neighborhood of a harbor, frequented by sailors. He shudders at the thought of the sea, but allows himself, nevertheless, to be called "captain," and keeps a picture of the ship which he last had charge of, in a frame and glass. Such is the "skipper," as contrasted with the "seaman." The third, or, properly, the middle class, is represented by the "captain." He is neither seaman nor skipper, and there is nothing further to be said of him, than that he is "captain of this or that ship."

It is self-evident that the true seaman is to be found in all ranks: among the sailors of merchant-vessels, as well as among the midshipmen of the navy; although many a skipper and captain, favored by fortune, commands a frigate, which the seaman, who stands at the helm as a sailor, would be more capable of guiding. In respect to the three above appellations, we remark, in conclusion, that the word "seaman" is often used where skipper or captain is meant, and in English may, perhaps, be replaced by the word "sailor." But our notion of a good seaman is, evidently, something different from that of a good sailor, for every skipper and captain can be a good sailor—"if he has a good wind."

THE SEEN AND THE UNSEEN.

THERE is a spiritual element interfused through the whole material world, and which lies at the source of all action. It is this which lifts the world out of chaos, and clothes it with light and order. The most ordinary act springs out of the soul, and derives its character from the soul. It seems trifling only because its spiritual origin is forgotten. While on the surface of life all may be calm, it is startling to think what mysteries of passion and affection may be beneath.

We need not go far, if we will but open our eyes, to see how the most ordinary acts of man are penetrated by a spiritual element; and where this is, nothing can be tame or commonplace. Nothing, at first sight, is more worldly and unspiritual than a commercial newspaper. It deals solely with the affairs of the day, and with material interests. Yet, when we come to consider them, its driest details are instinct with human hopes, and fears, and affections; and these illuminate what was dark, and make the dead letter breathe with life. For example, in the paper of to-day, a

middle-aged man seeks employment in a certain kind of business. The advertisement has, in substance, been the same for weeks. For a time, he sought some place which presupposed the possession of business habits and attainments. Then there was a change in the close of the advertisement, indicating that he would do anything by which he could render himself generally useful to any employer. And this morning there is another change. He is willing to commence with low wages, as employment is what he especially wants. All this is uninteresting enough. Yet what depths of life may lie underneath this icy surface of business detail. It is easy for the fancy to seek out and make the acquaintance of this man.

Could we but look through these long lines of advertisements into the hearts of those who have published them, what a revelation would there be of human life! Here are partnerships formed and closed; young men entering into business, old men going out of it; new inventions and speculations; failures; sales of household furniture and dwellings. These have been attended by the most sanguine hopes, by utter hopelessness, by every form of fear, anxiety, and sorrow. This young man, just entering business, looks forward with anticipations bright as the morning to his marriage-day. This sale of furniture speaks of death, diminished fortunes, a scattered family. There is not a sale of stocks which does not straiten or increase the narrow means of widows and orphans. This long column of ship news—a thousand hearts are this moment beating with joy and thankfulness, or are oppressed by anxiety, or crushed down by sorrow, because of these records which to others seem so meaningless! One reads here of his prosperity; another of ruined fortunes; and the wrecked ship, whose crew was swept by the surge into the breakers, and dashed on the rocks—how many in their solitary homes are mourning for those who sailed with bright hopes in that ship, but who shall never return! And more than this—could these lines which record the transactions of daily business tell of the hearts which indited them, what temptations and struggles would they reveal! They would tell of inexperience deceived or protected, of integrity fallen or made steadfast as the rock, of moral trials, in which noble natures have been broken down or built up. Had we the key and the interpretation of what we here read, this daily chronicle of traffic would be a sadder tragedy than any which Shakespeare wrote. It is the same with all human labor. "The spirit giveth life." Were it not so earth would be a dungeon. If toil were only toil, or if it had no object but the supply of one's own bodily wants—to gratify

hunger and thirst, or to minister to luxurious appetites—if this were all, the labor of man would be as the labor of brutes. But all the products of man's labor are but symbols of a spiritual life beneath. To the outer eye, what toilsome drudgery is oftentimes the life of a mother of a family! She labors by day, she watches by night; her years are worn out in disconnected, trifling occupations. And yet, could we look beneath, when the mind is right, we should find all these details bound together, elevated, hallowed by the spiritual element blended with them. While with housewifely care she goes from room to room, under the labor of her hands grow up, as under the sunshine and dew, the affections and virtues of a happy home.

Thus ever under the visible is the invisible. Through dead material forms circulate the currents of spiritual life. Deserts, rocks, and seas, and shores, are humanized by the presence of man, and become alive with memories and affections. There is a life which appears, and under it, in every heart, is a life which does not appear—which is, to the former, as the depths of the sea to the waves, and the bubbles, and the spray, on its surface. There is not an obscure house among the mountains where the whole romance of life, from its dawn to its setting, through its brightness and through its gloom, is not lived through. The commonest events of the day are products of the same passions and affections which, in other spheres, decide the fate of kingdoms. Outwardly, the goings of ordinary life are like the movements of machinery—lifeless, mechanical, commonplace repetitions of the same trifling events. But they are neither lifeless, nor old, nor trifling. The passions and affections make them ever new and original, and the most unimportant acts of the day reach forward in their results into the shadows of eternity.

Open but the eye, and we live in the midst of wonders. The enthusiastic and ardent pine for scenes of excitement. They fly to seek them in foreign lands; they bury themselves in the pages of poetry and romance; the everyday world around them seems to them stale, flat, and unprofitable. But it is only in seeming. At our very doors transpire realities, by whose side, were the veil taken away which hides them, the fictions of romance would grow pale. Around us, all the times, in light and in darkness, is going on the mighty mystery of life, and passing before us in shadow is the dread mystery of death. Want and prosperity, anxieties which wear out the heart of youth, passions which sink it to the dust, hopes that lift it to the heaven—hid by the veil of custom and the senses—these are alive all around us.

GOVERNMENT OF THE TEMPER.

It is observed that every temper is inclined, in some degree, to either passion, peevishness, or obstinacy. Many are so unfortunate as to be inclined to each of the three in turn: it is necessary, therefore, to watch the bent of our nature, and to apply the remedies proper for the infirmity to which we are most liable. With regard to the first, it is so injurious to society, and so odious in itself, especially in the female character, that one would think shame alone would be sufficient to preserve a young lady from giving way to it; for it is as unbecoming her character to be betrayed into ill-behavior by *passion* as by *intoxication*, and she ought to be ashamed of the one as much as of the other. Gentleness, meekness, and patience, are her peculiar distinctions; and an enraged woman is one of the most disagreeable sights in nature.

It is plain from experience that the most passionate people can command themselves when they have a motive sufficiently strong—such as the presence of those they fear, or to whom they particularly desire to recommend themselves. It is therefore no excuse to persons, whom you have injured by unkind reproaches, and unjust aspersions, to tell them you was in a passion: the allowing yourself to speak to them in passion is a proof of an insipient disrespect, which the meanest of your fellow-creatures would have a right to resent. When once you find yourself heated so far as to desire to say what you know would be provoking and wounding to another, you should immediately resolve either to be silent or to quit the room, rather than to give utterance to anything dictated by so bad an inclination. Be assured you are then unfit to reason or to reprove, or to hear reason from others. It is therefore your part to retire from such an occasion of sin; and wait till you are cool, before you presume to judge of what has passed. By accustoming yourself thus to conquer and disappoint your anger, you will, by degrees, find it grow weak and manageable, so as to leave your reason at liberty: you will be able to restrain your tongue from evil, and your looks and gestures from all expressions of violence and ill-will. Pride, which produces so many evils in the human mind, is the great source of passion. Whoever cultivates in himself a proper humility, a due sense of his own faults and insufficiencies, and a due respect for others, will find but small temptation to violent or unreasonable anger.

In the case of real injuries, which justify and call for resentment, there is a noble and generous kind of anger, a proper and necessary part of our nature, which has nothing sinful or degrading. I would not wish you to

be insensible to this; for the person who feels not an injury, must be incapable of being properly affected by benefits. With those who treat you ill without provocation, you ought to maintain your own dignity. But, in order to do this, while you show a sense of their improper behavior, you must preserve calmness, and even good breeding, and thereby convince them of the impotence as well as injustice of their malice. You must also weigh every circumstance with candor and charity, and consider whether your showing the resentment deserved may not produce ill consequences to innocent persons—as is almost always the case in family quarrels—and whether it may not occasion the breach of some duty or necessary connexion, to which you ought to sacrifice even your just resentments. Above all things, take care that a particular offence to you does not make you unjust to the general character of the offending person. Generous anger does not preclude esteem for whatever is really estimable, nor does it destroy good-will to the person of its object: it even inspires the desire of overcoming him by benefits, and wishes to inflict no other punishment than the regret of having injured one who deserved his kindness; it is always plausible and ready to be reconciled as soon as the offender is convinced of his error; nor can any subsequent injury provoke it to recur to past disobligations, which had been once forgiven.

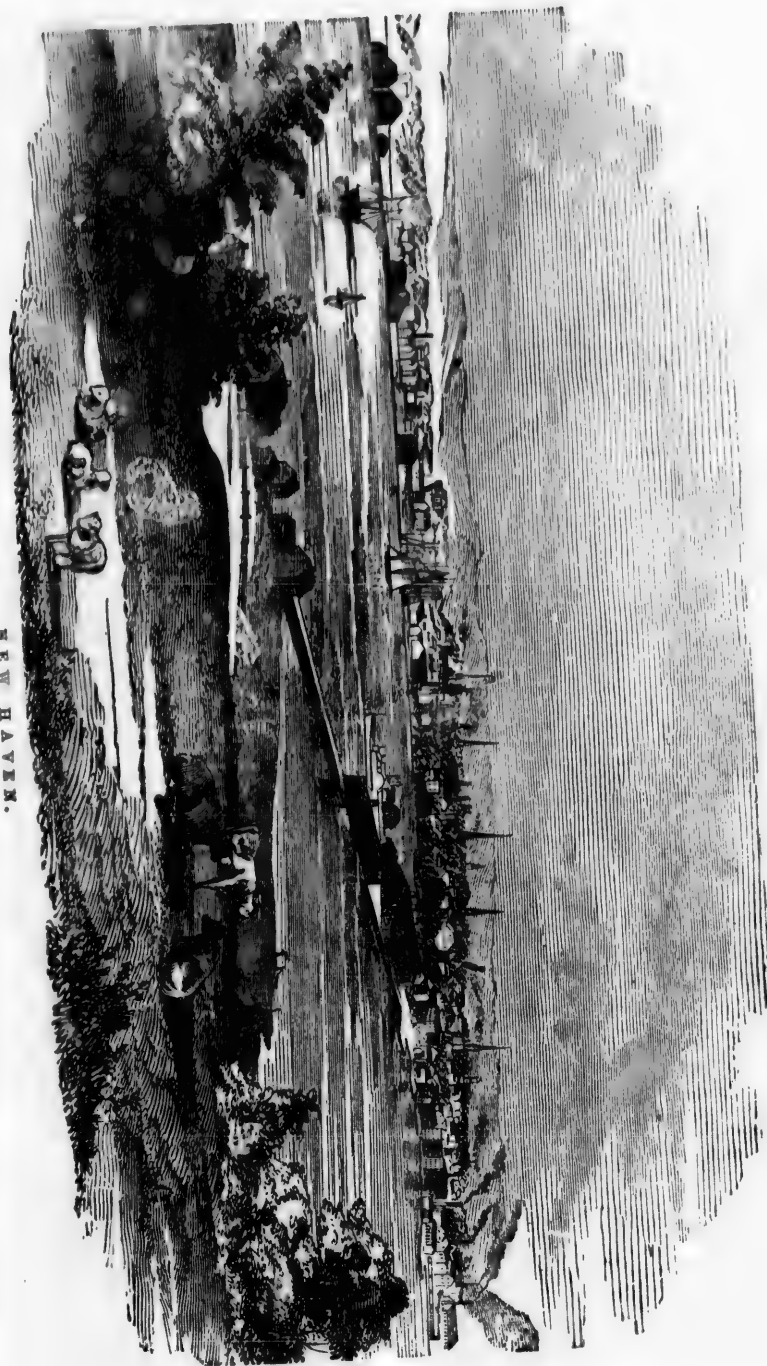
ROSES.

THE ROSE has been from time immemorial the flower *par excellence*; and it still retains the throne of its early glory, notwithstanding the multitude of new flowers that have been imported, or bred out of the old varieties by art, and the extreme beauty of many of these; and, in one or other of its varieties or modes of treatment, it is a flower of all civilized countries; it is a flower accessible to people of all ranks, and generally possessed by them if they have even the smallest plot of ground. The cottager is in great part won from grosser occupations in his leisure hours by attending to the rose-trees which adorn his little patch of ground, or are trained with wild and luxuriant grace upon the rude walls of his cottage, making the whole appear like a favorite work of nature in one of the gayest of her sportive moods. Then, if the man of rank and wealth is in possession of a complete bed of roses, with their dwarfs, shrubs, standards, and pillars, all in the luxuriance of bloom, he has a collection of beauty and a richness of perfume which no other production of art and nature can equal.

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NEW HAVEN.



OREGON.

THAT extensive portion of North America, lying west of the Rocky mountains, and extending to the Pacific, called Oregon, was for a long period a subject of the rival claims of Great Britain, and the United States. The whole country extends from the Klamet range, or Snowy mountains, about the parallel of forty-two degrees, on the south, to fifty-four degrees, forty minutes, on the north, and from the Rocky mountains on the east to the Pacific ocean on the west, comprising an area of about four hundred thousand square miles. The section more immediately in dispute was that watered by the Columbia river and its tributaries. But by a treaty concluded at Washington, on the fifteenth of June, 1846, this long-pending question, which at times seriously threatened to break the harmony existing between the two nations, was permanently settled, by fixing the line of boundary between the respective portions of each country, with some minor stipulations, at the forty-ninth parallel of latitude, giving to Great Britain all lying north of that line, and to the United States all south of it. The latter portion, which is the subject of this article, extends from latitude forty-two to forty-nine degrees, and comprises about two hundred and fifty thousand square miles. As the wild regions this side of the Rocky mountains are becoming occupied and subdued, under the genial influence of civilization, the tide of emigration begins to surmount that hitherto impassable barrier, and many a hardy settler, in search of a new home, now directs his course toward the distant Oregon, and settlements, and even cities, are already rising upon the Pacific seaboard. The discussion and final settlement of the Oregon boundary question, having of itself awakened an interest in that remote region, a brief historical and topographical sketch of the Oregon territory, may be of interest to our readers.

Captain Robert Gray, in the ship *Columbia*, from Boston, discovered and entered the mouth of the Columbia river, May 7th, 1792, and gave it the name of his vessel. He was the first person that established the fact of the existence of this great river, and this gave to the United States the right of discovery. In 1801-'5, Captains Lewis and Clark, under the direction of the government of the United States, explored the country from the mouth of the Missouri, to the mouth of the Columbia, and spent the winter of 1805-'6, at the mouth of the Columbia. This exploration of the river Columbia, the first ever made, constitutes another ground of the claim of the United States to the country. In 1808, the Missouri fur company, at St. Louis, estab-

lished a trading post beyond the Rocky mountains, on the head-waters of Lewis river, the first ever formed on any of the waters of the Columbia. In 1810, the Pacific fur company, under John Jacob Astor, of New York, was formed; and in 1811, they founded ASTORIA, eight miles from the mouth of the Columbia, as their principal trading post, and proceeded to establish others in the interior. A little later in the same year, the Northwest company sent a detachment to form establishments on the Columbia; but when they arrived at the mouth of the river, they found the post occupied. In consequence of the exposure of Astoria by the war of 1812, the post was sold out to the Northwest company. At the close of the war, Astoria was restored, by order of the British government, to its original founders, agreeably to the first article of the treaty of Ghent. Various attempts have been made since the war to renew the fur trade in Oregon. In 1821, the Hudson's bay, and Northwest company, who had previously been rivals, were united, and since that time have greatly extended their establishments, in the region of Oregon.

The Oregon territory is divided into three natural belts or sections, viz: 1st, That between the Pacific ocean and the President's range, or Cascade mountains, called the *western section*; 2d, That between the Cascade and Blue mountain range, or *middle section*; 3d, That between the Blue and Rocky mountain chains, or *eastern section*: and this division will equally apply to the soil, climate, and productions. All these divisions are crossed by the Columbia river; the main stream is formed, in the middle region, by the union of several branches flowing from the Rocky mountains, and receiving in their course several smaller streams, draining the intermediate sections. The mountain ranges extend, for the most part, in parallel lines with the coast, rising, in many places above the region of perpetual snows (here 5,600 feet above the sea), which naturally produces a difference of temperature between them and also affects their productions.

The Cascade range, or that nearest the coast, runs parallel with the seacoast, the whole length of the territory, and rising in many places in regular cones, from 12,000 to 14,000 feet above the level of the sea.

The distance from the seashore to this chain, is from one hundred to one hundred and fifty miles, and the ridge almost interrupts the communication between the first and second sections, except where the Columbia river forces a passage through it. The climate of this section is mild throughout the year, experiencing neither the extreme cold of winter nor the heat of summer. The prevailing

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winds in the summer are from the northward, and westward, and in the winter, from the southward, and westward, and southeast, which are tempestuous. The winter is supposed to last from December to February. Rains usually begin to fall in November, and last till March; but they are not heavy, though frequent. Snow sometimes falls, but it seldom lies over three days. The frosts are early, occurring in the latter part of August; this, however, is to be accounted for by the proximity of the mountains. Fruit-trees blossom early in April. The soil, in the northern parts, varies from a light brown loam to a thin vegetable earth, with gravel, and sand, as a subsoil; in the middle parts, from a rich heavy loam and unctious clay, to a deep heavy black loam, on a trap-rock; and in the southern (the Willamette valley), the soil is generally good, varying from a black vegetable loam to decomposed basalt, with stiff clay, and portions of loose gravel-soil. The hills are generally basalt, and stone, and slate; between the Umpqua river, and the southern boundary the rocks are primitive, consisting of slate, hornblende, and granite, which produce a gritty and poor soil; there are, however, some places of rich prairie, covered with oaks. It is, for the most part, a well-timbered country. It is intersected with the spurs, or offsets from the Cascade mountains, which render its surface much broken; these are covered with a dense forest. The timber consists of pines, firs, spruce, oaks (red and white), ash, arbutus, arbor, vitae, cedar, poplar, maple, willow, cherry, and hew, with a close undergrowth of hazel, rubus, roses, &c. The richest and best soil is found on the second or middle prairie, and is best adapted for agriculture; the high and low being excellent for pasture-land. The climate and soil are admirably adapted for all kinds of grain—wheat, rye, oats, barley, peas, &c. Indian corn does not thrive in any part of this territory where it has been tried. Many fruits appear to succeed well, particularly the apple, and pear. Vegetables grow exceedingly well, and yield most abundantly.

The Blue mountains are irregular in their course, and occasionally interrupted, but generally running in a northerly direction; they commence in the Klamet range, near the southern boundary of the territory; they are broken through by the Saptin or Lewis river, and branch off in hills of moderate elevation, until they again appear on the north side of the Columbia river, above the Okanagan river, passing in a north direction, until they unite with the Rocky mountains, in latitude fifty-three degrees north. The climate of the middle section is variable; during the summer the atmosphere is much drier and warmer,

and the winter much colder, than in the western section. Its extremes of heat and cold are more frequent and greater, the mercury, at times, falling as low as eighteen degrees below zero, Fahrenheit, in winter and rising to one hundred and eighty degrees in the shade, in summer: the daily difference of temperature is about forty degrees of Fahrenheit. It has, however, been found extremely salubrious, possessing a pure and healthy air. No dews fall in this section. The soil is, for the most part, a light sandy loam; in the valleys a rich alluvial; and the hills are generally barren. The surface is about one thousand feet above the level of the western section, and is generally a rolling prairie country. In the centre of this section, and near and around the junction of the Saptin or Snake and Columbia rivers, is an extensive rolling country, which is well adapted for grazing. South of the Columbia, and extending to the southern boundary of the territory, it is destitute of timber or wood, although there are portions of it which might be advantageously farmed.

The Rocky mountains form the boundary of the eastern section, and of the territory. They commence on the Arctic coast, and continue an almost unbroken chain until they merge in the Andes of South America. The climate of the eastern section is extremely variable. In each day there are all the changes incident to spring, summer, autumn, and winter. There are places where small farms might be located, but they are few in number. The soil is rocky and uneven, and presents an almost unbroken barren waste. Stupendous mountain-spurs traverse it in all directions, affording little level ground. Snow lies on the mountains nearly, if not quite, throughout the year. It is exceedingly dry and arid, rains seldom falling, and but little snow. This country is partially timbered, and the soil much impregnated with salts.

The Columbia is the great river of the territory. Its northern branch takes its rise in the Rocky mountains, in latitude fifty degrees north, longitude one hundred and sixteen west; thence it pursues a northern route, to near McGillivray's pass in the Rocky mountains. At the boat encampment, the river is thirty-six hundred feet above the level of the sea (here it receives two small tributaries—the Canoe river, and that from the Committee's Punch-bowl), thence it turns south, having some obstructions to its safe navigation, and receiving many tributaries in its course to Colville, among which are the Kootanie, or Flat Bow, and the Flat Head, or Clarke river, from the east, and that of Colville from the west. This great river is bounded thus far on its course, by a range of high mountains, well

wooded, and in places expands into a line of lakes before it reaches Colville, where it is two thousand and forty-nine feet above the level of the sea, having a fall of five hundred and fifty feet in two hundred and twenty miles. To the south of this it trends to the westward, receiving the Spokane river from the east, which is not navigable, and takes its rise in the lake of Cœur d'Alene. Thence it pursues a westerly course for about sixty miles, receiving several smaller streams, and at its bend to the south, it is joined by the Okanagan, a river that has its source in a line of lakes, affording canoe and boat navigation for a considerable extent to the northward. The Columbia thence passes to the southward, until it reaches Wallawalla, in the latitude of forty-five degrees, a distance of one hundred and sixty miles, receiving the Piscous, Y'Akama, and Point de Boise, or Entyatecom, from the west, which take their rise in the Cascade range, and also its great southeastern branch, the Saptin or Lewis, which has its source in the Rocky mountains, near our southern boundary, and brings a large quantity of water to increase the volume of the principal stream. The Lewis is not navigable, even for canoes, except in reaches. The rapids are extensive, and of frequent occurrence. Its length, to its junction with the Columbia, is five hundred and twenty miles. The Columbia, at Wallawalla, is one thousand two hundred and eighty-six feet above the level of the sea, and about thirty-five hundred feet wide: it now takes its last turn to the westward, receiving the Umatilla, Quisnel's, John Day's, and De Chute rivers, from the south, and Cathlatate's from the north, pursuing its rapid course of eighty miles, previous to passing through the range of Cascade mountains, in a series of falls and rapids that obstruct its flow, and form insurmountable barriers to the passage of boats by water during the floods. These difficulties, however, are overcome by portages. Thence there is still-water navigation, for forty miles, when its course is again obstructed by rapids. Thence to the ocean, one hundred and twenty miles, it is navigable for vessels of twelve feet draught of water at the lowest state of the river, though obstructed by many sand-bars. In this part it receives the Willamette from the south, and the Cowlitz from the north. The former is navigable for small vessels twenty miles, to the mouth of the Klackamas, three miles below its falls; the latter can not be called navigable, except for a small part of the year, during the floods, and then only for canoes and barges. The width of the Columbia, within twenty miles of its mouth, is much increased, and it joins the ocean between Cape Disappointment, and Point Adams, forming a

sand-pit from each, by deposit, and causing a dangerous bar, which greatly impedes its navigation and entrance. The mouth of the Columbia, however, is every day becoming better known. A new and excellent channel has recently been discovered. It is to the northward of "Peacock Spit," and at no point in this channel is there less than three and a half fathoms depth of water. From explorations, it is thought there is also an available south channel, which, should it prove to be well founded, will make three entrances to the great western river.

Fraser's river takes its rise in the Rocky mountains, about the fifty-third parallel, and after receiving the waters of several smaller streams, breaks through the Cascade range, in a succession of falls and rapids, and empties into the gulf of Georgia, about the forty-ninth parallel, its whole length being three hundred and fifty miles. The Chikeelis is next in importance. It has three sources among the range of hills that intersect the country north of the Columbia river. After a very tortuous course, and receiving some small streams, issuing from the lakes in the high ground near the head-waters of Hood's canal and Puget's sound it disembogues in Gray's harbor. To the south of the Columbia there are many small streams, but three of which deserve the name of rivers. Those are the Umpqua, Too-too-tut-na or Rogues' river, and the Klomet, the last-named entering into the ocean south of the parallel of forty-two degrees.

The character of the great rivers of Oregon is peculiar: rapid, and sunken much below the level of the country, with perpendicular banks; indeed, they are, as it were, in trenches, it being extremely difficult to get at the water in many places, owing to the steep basaltic walls; and, during the rise, they are in many places confined by dalles, which back the water some distance, submerging islands and tracts of low prairie, giving the appearance of extensive lakes.

In the various sections of Oregon there are many lakes. The Okanagan, Stuart's, Quisnel's, and Kamloop's, are the largest in the northern section. The Flatbow, Cœur d'Alene, and Kulluspelm, in the middle section, and those forming the head-waters of the large rivers in the eastern section. The country is well watered, and there are but few places where an abundance of water, from either rivers, springs, or rivulets, can not be obtained. The smaller lakes add much to the picturesque beauty of the country. They are generally at the head-waters of the smaller streams.

There are extensive fisheries in the rivers and on the coast. They all abound in salmon of the finest flavor, which run twice a year,

beginning in May and October, and appear inexhaustible. The Columbia produces the largest, and probably affords the greatest numbers. There are some few of the branches of the Columbia that the spring fish do not enter, but they are plentifully supplied in the fall. The great fishery of the Columbia is at the Dalles; but all the rivers are well supplied. The last one on the northern branch of the Columbia is near Colville, at the Kettle falls; but salmon are found above this in the river and its tributaries. In Frazer's river the salmon are said to be very numerous, but not large; they are unable to get above the falls, some eighty miles from the sea. In the rivers and sounds are found carp, soles, salmon, salmon-trout, sturgeon, cod, flounders, ray, perch, herring, lamprey-eels, and a kind of smelt called "shrow," in great abundance; also large quantities of shell-fish, viz., crabs, clams, oysters, mussels, &c., which are all used by the natives, and constitute a large proportion of their food. Whales, in numbers, are found along the coast, and are frequently captured by the Indians in and at the mouth of the straits of Juan de Fuca.

Abundance of game exists, such as elk, deer, antelope, bears, wolves, foxes, muskrats, martens, beavers, a few grizzly bears, and squirrels, which are eaten by the Canadians. In the middle section, or that designated as the rolling prairie, no game is found. In the eastern section the buffalo is met with. The fur-bearing animals are decreasing in numbers yearly, particularly south of the parallel of forty-eight degrees; indeed, it is very doubtful whether they are sufficiently numerous to repay the expense of hunting them. The Hudson's bay company have almost the exclusive monopoly of this business. They have decreased, owing to being hunted without regard to season. This is not, however, the case to the north; there the company have been left to exercise their own rule, and prevent the indiscriminate slaughter of either old or young, out of the proper season. In the spring and fall the rivers are literally covered with geese, ducks, and other water-fowl.

OREGON CITY.—The colony at the falls of the Willamette river, forty miles above the mouth of the Columbia, have laid the foundation of a town called "OREGON CITY," a view of which is given on p. 337. It is from a sketch taken on the spot. The colony here intend to avail themselves of the immense water-power, and have commenced making extensive improvements. They have organized themselves into a government for self-protection, and adopted a constitution. Their constitution recognizes religious and civil liberty, trial by jury, and the writ of habeas corpus; enacts that schools shall be estab-

lished for the general education of the people; that the utmost good faith shall be observed toward the Indians; and that slavery and involuntary servitude shall only be countenanced as a punishment of crime. A house of representatives is established by the code of laws, and its majesty is declared the fundamental principle of government. The house appoints a governor, who holds his office for two years, and supreme and other courts of law, for the exercise of the judicial power. All free male descendants of white men, inhabitants of the territory, may, under this constitution, vote at elections and be eligible to offices; and any settler who may reside in Oregon, for six months, shall be entitled to a citizen's privileges. The currency laws are founded upon a good basis, and the importation or manufacture of ardent spirits is prohibited by an act, which imposes fines for transgressing its provisions.

The upper colony from the United States, is situated on the Willamette river, ninety-four miles from its entrance into the Columbia. It consists of about one hundred families, who raise considerable grain, and have about four thousand head of cattle, extensive fields of wheat, potatoes, peas, and vegetables of all descriptions. They have hogs, poultry, &c., in abundance.

A road has been projected along the south side of the Columbia river from the Dalles to Oregon city. This will afford a safe and a comparatively easy route from the Blue mountains to the valley of the Willamette at all seasons of the year. It will also open to the settlements of the valley a country of almost boundless extent for the pasturage of sheep and stock of all kinds.

Fort Vancouver, on the north bank of the Columbia, ninety miles from the ocean, has been the principal seat of the British fur-trade. Fort Wallawalla is on the south side of the Columbia, ten miles below the entrance of the Lewis river. There are also several other settlements at different points of the territory. There have also been for some years several missionary stations at different points in Oregon, and since the settlement of the question of boundary, new ones have been established.

Like the earlier settlers on the Atlantic seaboard, the settlers in Oregon are subject to attacks from the Indians. But the Indian race, from their rude treatment of disease, and their reckless and dissipated habits, are rapidly decreasing in numbers, and fast disappearing from the country—while the protecting arm of the national government, will soon be extended over the territory; which with the increasing settlements of the whites, will be an effective shield, from the murderous attacks of this savage race.



Portrait of Christopher Columbus.

CHRISTOPHER COLUMBUS, AND THE DISCOVERY OF AMERICA.

THE discovery of a new planet, so small and distant, that to the greater part of mankind it must ever remain invisible, has lately been exciting the curiosity of the public, and will in all probability secure immortality to the fortunate astronomer who first observed it. Such are among the greatest triumphs reserved for science in the present day, when every corner of the globe has been searched out, and the very stars of heaven numbered as they shine. Far different was the state of the world in the middle of the fifteenth century, when, awaking from the slumber of ages, men set themselves to explore the laws regulating the system of the heavens and the earth, and when new or unknown worlds remained in both to reward their labors.

Among the successful discoverers of that period, the name of Christopher Columbus, or, as he designated himself when he fixed his residence in Spain, Cristoval Colon, is the most justly distinguished. Some obscurity attaches to the place of his birth, but the honor seems due to Genoa, where his father, a poor but worthy woolcomber, was long resi-

dent. When his name had become illustrious, many noble families claimed kindred with Columbus, but on such uncertain grounds that his son and historian was content to assume him as the founder of the family; "for I am of opinion," says he, "that I should derive less dignity from any nobility of ancestry, than from being the son of such a father." In the ancient city of Genoa, then, in the year 1435, or 1436, was Columbus born. His education seems to have been considerable for the period, having been taught reading and writing, arithmetic, drawing, and painting, with such success, that, as one of his historians observes, by these acquirements he might have earned his bread. At Pavia, then a celebrated school, he subsequently studied Latin; and, with more diligence, geometry, geography, astronomy, and navigation; to which branches his inclination so powerfully led him, that he afterward ascribed it to a secret impulse from the Deity, leading him to those studies which should fit him to accomplish his high destiny. His birth in a maritime city like Genoa, at a time when reviving literature was anew unfolding the geographical knowledge and theories of the ancients, was no less fortunate, and must have tended greatly to strengthen his inclination for naval pursuits.

His life after leaving the university, is for some time involved in obscurity, perhaps from the unwillingness of his son to disclose the mean condition from which he rose. If he ever followed his father's trade, as has been asserted, it could only be for a short time, as he says that he began to navigate when only fourteen years of age. The Mediterranean, surrounded by numerous independent states, engaged not only in mutual commerce, but in frequent wars and piratical excursions, formed a good though rough school for the young sailor, in which he would soon acquire those habits of decision, boldness, and command over fierce associates, so essential to his future success. In 1459, he was employed in the Genoese fleet, which assisted the duke of Calabria in his attempts to recover the throne of Naples for his father, Count René of Provence. Under this king he had command of a vessel sent to Tunis, to capture a galley lying there. His sailors, frightened by reports of the enemy's strength, insisted on returning; but Columbus, while seeming to yield, by altering the card of the compass, led them to the place he wished, and as he boasts of his deceit, probably succeeded in his enterprise. The attempt on Naples, after a four years' contest, failed, and Columbus seems for some time to have been occupied in commercial voyages in the Mediterranean, in one of which he is known to have visited the isle of Scio. Two admirals of his own name, or Colombo, as it is in the Italian, then commanded the fleets of Genoa, which were usually under the influence of France, notwithstanding the nominal independence of the republic. The younger of these was so famous for his exploits against the infidels, that it is said the Moorish women used his name to quiet their unruly children. Genoa being then at war with Venice, this bold corsair on one occasion undertook to intercept four rich Venetian galleys on their return from Flanders. The vessels met on the coast of Portugal, and a desperate battle ensued. The vessel commanded by Columbus, having grappled with her opponent, according to the custom of that time, both were involved in flames, and it being impossible to separate them, the crews had to escape into the sea. Columbus being an expert swimmer, seized an oar, and by means of it reached the shore, though fully two leagues distant. In this strange fashion, his son relates that Columbus first arrived in Portugal, and repairing to Lisbon, where he found many of his countrymen, took up his abode for some time in that city. As this incident happened in the summer of 1485, if Columbus was actually engaged in it, this must have been at a later period of his history, after he had been some time in Portugal.

No country in Europe was at that time better adapted for the future discoverer. Portugal, under the influence of Prince Henry, was engaged in the full career of maritime adventure. Despising the fabled dangers of the ocean and the torrid zone, the Portuguese were gradually extending their voyages along the African coast, and the prince just mentioned already foresaw the time when, following the course of Hanno round the southern extremity of Africa, a direct road should be opened to the treasures of the east. Columbus arrived in Portugal in 1470. He was then in the full vigor of manhood, and is described by his contemporaries as tall, well-formed, muscular, and of an elevated, dignified demeanor. His visage was long, his complexion fair and ruddy, his nose aquiline, his eyes light gray, but apt to enkindle, and his hair, once of a light color, now white with care and trouble. He had subdued his naturally irritable temper, and was amiable and affable in social intercourse. He was at the same time strict in his religious observances, and his whole character was tinctured with a lofty, solemn enthusiasm, which led him to regard himself as the appointed agent to work out some great designs of Heaven. In this country, and with these feelings, it required but a slight impulse to direct the whole mind and energy of Columbus, into the path of maritime discovery. And this he received from an apparent accident which might have rather seemed destined to fix him at home. When attending religious service in the convent of All Saints, he saw and became enamored with a lady of Italian descent, the daughter of a distinguished navigator in the service of Prince Henry. Having married the lady, he had access to the charts and papers of her father, now dead, and thus became acquainted with the plans and routes of the Portuguese. When on shore, he occupied himself in constructing maps and charts for the support of his family, but occasionally joined in the expeditions of his adopted countrymen to the coast of Guinea. He also resided for some time on the island of Porto Santo, the governor of which was married to his wife's sister. Here his son, Diego, was born: and Columbus had frequent opportunities of meeting with persons engaged in the discoveries on the coast of Africa. Here also rumors of islands seen in the western ocean were frequently heard, and revived the belief in the fabled Atlantis of Plato. These tales, however little credit he might attach to them, and his trade of map-making, soon gave a decided bias to his mind, and ripened into a grand scheme.

There were various grounds on which Columbus built his faith of new lands to be discovered.

covered by sailing west in the Atlantic ocean. The travels of Marco Polo had made known to Europeans the vast empire of China, with the Japanese islands in the adjoining sea, and excited men's cupidity by accounts of their luxury and wealth. Columbus assumed that the earth was a sphere, and not a plane as was at that time the orthodox belief, and hence inferred that by sailing west he could reach those countries to which a long and wearisome overland journey had conducted the Venetian traveller. The width of the intervening ocean Columbus greatly underrated, having adopted very erroneous notions of the true dimensions of the globe from the Arabic geographers, then the highest authorities on scientific subjects. He was confirmed in this opinion of land to be discovered in the west, by various passages in ancient authors,—in Aristotle, Pliny, Strabo, and Seneca; of whom the last in a remarkable passage prophesies that the time should come when the chains of ocean should be loosened, and new worlds expand to the astonished gaze of men. Columbus also collected various indications of unknown land in the west, some of them very curious—as a piece of carved wood, evidently not labored with an iron instrument, found far west of Cape St. Vincent; the unknown trees, seeds, and immense reeds, driven by currents on the Azores and coasts of Europe; and especially the dead bodies of two men, with features unlike any known tribe, cast on the island of Flores. His religious spirit also led him to read his discovery as foretold in Holy Writ, and dimly announced in the mystic revelations of the prophets. These are the grounds he himself assigned for his opinion; but his enemies have ascribed his belief to a shipwrecked pilot, who died in his house, and left him written accounts of unknown lands seen in the west, or to a map of Martin Behem, a celebrated contemporary cosmographer. A far more probable source of information is to be found in Columbus's intercourse with Iceland, to which he made a voyage in 1474, as its inhabitants are well known to have discovered, and even founded a colony named Vinland, on the coast of North America, some centuries before. That Columbus never alluded to these discoveries may be ascribed to his fear of thus lessening his own reputation, and to the fact that the description given by the Northmen of the regions they visited did not correspond with the brilliant picture of Cathay and Cipango, by which he hoped to induce some sovereign to aid him in his splendid enterprise.

Columbus is reported to have first proposed his scheme of discovery to his native city, and on its rejection there, to have applied to the court of Portugal. His son relates that the

king at first was favorable to the proposition, but finally refused it in consequence of his high demands of honors and rewards. Another authority states that the king looked on Columbus as a vain-glorious boaster, and only referred his proposition to a junta of learned men, in consequence of his importunities. This junta, as was to be expected, treated the project as extravagant and visionary, and when it was brought before the royal council, their decision was confirmed. John II. was thus led to reject the proposal, but at the same time, with a meanness unworthy of a great and wise prince, endeavored to deprive Columbus of the honor due to his genius. Having obtained all his maps, plans, and other documents, a vessel was secretly fitted out and directed to pursue the route indicated by Columbus. However, a storm arose, as if designed to defeat this treachery, and the sailors easily frightened, and devoid of zeal, returned home, ridiculing a scheme which they wanted courage to prosecute. Disgusted at this unworthy attempt, Columbus refused all further negotiation with King John, and his wife being now dead, he resolved to leave Portugal. In the end of 1484, he left Lisbon secretly, either fearing that the king might try to detain him, or more probably wishing to elude his creditors. Next year he was in Genoa, and probably then made that proposition to his native city, which has been erroneously placed at an earlier period. The republic, exhausted by war, and with declining commerce, was in no condition to accept this offer. Some affirm that he then carried his proposal to Venice, where it was also declined, in consequence of the critical state of affairs; but the national hostility of the rival republics, and the want of all express evidence, render this fact more than doubtful.

Columbus's wanderings are for a time hidden in obscurity, and the next trace of him is in Spain, on his way to the court of Ferdinand and Isabella. While offering the gift of a new world to monarchs, he himself was in want of the merest necessities. Near the little seaport of Palos, in Andalusia, stood a Franciscan convent. One day a stranger, accompanied by a young boy, stopped at the gate, and asked from the porter a little bread and water for his child. In the meantime the prior, Juan Perez, passing by struck with his appearance, entered into conversation with the stranger, and was so interested in his story, as to detain him as his guest. The stranger, it need hardly be said, was Columbus, on his way to a neighboring town, to seek his brother-in-law, married to a sister of his late wife. The prior, though deeply interested in the magnificent views of Columbus, had too little confidence in his own judgment to give them

immediate approval, and sent for a scientific friend, Garcia Fernandez, the physician of Palos. After many conferences and consultations with the most experienced mariners of the neighboring town, the friar and his friend decided in favor of Columbus's plan, and advised him to lay it before the Spanish sovereigns. To aid him in this, Friar Juan Perez not only gave him a letter of recommendation to Fernando de Talavera, the queen's confessor, with whom he was on intimate terms, but in the meantime took charge of his son Diego. Inspired by this kindness with new hopes, Columbus set out in the spring of 1486, for the court of Castile.

This was truly the heroic age of Spanish history, when the marriage of Ferdinand and Isabella, uniting the once rival kingdoms of Aragon and Castile, exalted the power of the cross, and broke the terrible sway of the crescent. The fierce Moors, shut up in the mountain fastnesses of Granada, with difficulty defended this last remnant of their once powerful empire. The king and queen, though preserving their separate rights as independent sovereigns, yet made mutual cause against the unbelievers. Ferdinand was a wise, and prudent, though cold, selfish, and artful sovereign, fighting rather for dominion than religion, and inspired more by bigotry than religion. His three great objects—the conquest of the Moors, the expulsion of the Jews, and the establishment of the inquisition, were pursued from the commencement of his reign with unrelenting energy, and perhaps as much from motives of politics as religion. In all of them his queen, with more of a woman's heart and innate benignity of disposition, tried to modify his cruel zeal, even against the influence of her spiritual advisers. In many instances she exhibited much firmness and intrepidity, but was more distinguished by her zeal for the welfare of her people, her labors to heal the wounds which internal wars had inflicted, and her fostering care of literature and science. To these princes, Columbus now proceeded with his proposals; but did not find that ready access he had expected. Talavera regarded his scheme as absurd; and the courtiers contrasted the splendor of his speculations with the poverty of his garb. "Because he was a stranger and went but in simple apparel, nor otherwise credited than by the letter of a grey friar, they believed him not, neither gave ear to his words, whereby he was greatly tormented in his imagination." The princes too, were now personally engaged in the Moorish war; sometimes attacking their cities, at others hurried away to preserve their own country from the merciless ravages of the Saracen cavalry. Amidst such pressing affairs, it is little wonder that the wild

theories of a poor unfriended stranger met with a slow hearing. For some time he appears to have again supported himself by the sale of maps, while following the movements of the court. His earnest enthusiasm, however, gradually gained him friends and supporters; among them the celebrated Cardinal Mendoza, archbishop of Toledo, who to the scholarship of the period, added the qualities of a quick prudent man of business. He was in great favor with his sovereigns, who consulted him on all matters of consequence, so that he was named "the third king of Spain." The cardinal, when once convinced that the theory of Columbus involved nothing heretical, procured him an audience at court, where his modest self-possession, and the practical scientific reasons with which he supported his opinion, so far convinced Ferdinand, that he appointed a council of learned men to consider the question and make a report to him.

This council met in the Dominican convent at Salamanca, where Columbus was in the meanwhile lodged and entertained with great hospitality. The assembly consisted not only of learned professors, but of various dignitaries of the church and friars; none of them, we may well believe, likely to regard the bold innovator with much favor. It is said that when Columbus began his statement, the friars of St. Stephens, the most learned convent, alone paid attention, while the other members seemed as if already resolved not to be convinced. Their most formidable objections were drawn from misapplied passages of scripture, backed by quotations from some of the fathers, who, in their simplicity, had ridiculed the notion that the earth was round, and that there could possibly be men walking with their heels upward and their heads hanging down, or a place where trees grew topsy-turvy, and rain, hail, and snow, fell upward. Columbus skillfully avoided the danger of heresy while maintaining the truth of science; he showed that the language of scripture was figurative, and adapted to popular comprehension; that the fathers were not writing philosophical treatises, but pious homilies; and that the strongest argument, drawn from the notion that the torrid zone was uninhabitable, could not be true as he himself had already sailed on the coast of Guinea, almost to the equinoctial line. The engraving on p. 347, represents Columbus at the moment when the force of his argument has arrested the attention of the judges. While one hand rests upon the Bible, the index finger of the other is directing their attention to that point on the globe, where the undiscovered continent is supposed to lie. The argument, the proof, the refutation, are strikingly exhibited. His figure is erect, his

eye enkindled, and his whole expression animated. Around him are seen the judges, with pity, doubt, incredulity, and conviction, variously depicted in their countenances. The eloquence, truth, and devout enthusiasm of Columbus, convinced many of his judges, but the majority remained incredulous, conferences were multiplied without result, and a final decision was procrastinated till the return of summer (1487) again called the court, to begin the campaign against the Moors. During its continuance there was no time to listen to his suit, though Columbus followed the court and took an active part in the war, receiving occasional supplies of money.

These delays do not appear to have exhausted his hopes or patience, as in the spring of 1488, he declined an invitation from King John, to return to the court of Portugal, in which he was assured of protection from all civil or criminal suits pending against him. Perhaps disgust at the conduct of the king, had some influence on this refusal, as his brother Bartholomew was now in England, endeavoring to prevail on Henry VII. to engage in this project of discovery. From this monarch, he says that he received a favorable letter, though at what time, does not appear. In 1489, Columbus was commanded to attend the court, in order to have a conference with the king, but the Moorish war and other matters prevented him from obtaining an audience till the winter of 1491. The court was then preparing for the campaign in which Granada, the last refuge of the Moors, fell, and the council had given in its report that his scheme was vain and impossible. The most learned portion of its members were, however, in his favor, and hence probably the undecided nature of the royal answer, that the care and expense of the war, prevented them engaging in any new enterprise, but that on its conclusion, they would treat with him about his proposal. Bitterly disappointed with this cold and evasive answer, Columbus turned his back on the court where he had wasted so many precious years. But, bound to Spain by attachment to a lady of Cordova, he was unwilling to leave the country without another attempt. He applied to the dukes of Medina Sidonia, and Medina Celi, both possessing vast estates in the maritime provinces of Spain, which gave them the power and revenues rather of princes than of subjects. The former, however, rejected his proposal as the dream of an Italian visionary; and the latter, though so much disposed to engage in it, that he had actually three vessels ready to sail, at length, dreading the displeasure of the king, dismissed Columbus, advising him again to apply at the court, as the undertaking was too great for a subject,

and fit only for a sovereign power. Thus baffled anew in his hopes, Columbus resolved to proceed to France, but first returned to the convent where he had, seven years before, left his son. Here he meant to leave his second son, whom the lady mentioned above had borne him, and whom, though illegitimate, he always treated with the same favor as his elder brother.

The worthy friar, Juan Perez, was greatly moved by the disappointment of his friend; still more so when he heard his determination to quit Spain, and carry his important project to another land. He again consulted his friend the physician, calling in also Martin Alonzo Pinzon, the head of a distinguished and wealthy family of merchants in the neighboring town. Pinzon not only approved the plan of Columbus, but offered to bear the expense of a renewed application to the court. The friar, who had formerly been confessor to the queen, undertook to write her on the subject, and having persuaded Columbus to wait an answer, despatched a letter by a trusty messenger. In fourteen days he brought back an answer, thanking the friar for his timely services, and requesting Columbus to return to court. On receiving this epistle, Perez mounted his mule, and set out secretly for the court, passing through the newly-conquered territory of the Moors. He found the queen busy with the siege of Granada, but being admitted to an audience, pleaded the cause of Columbus with so much earnestness, that Isabella again requested him to be sent to her, and ordered him a sum of money to pay his expenses. This favorable result, was undoubtedly aided by the recommendation of the duke of Medina Celi. On being informed of this returning favor, Columbus again set out for the court, and arrived there in time to witness the surrender of Granada, the mournful departure of the Moors, and the triumphal entry of the Spaniards, into the magnificent halls of the Alhambra. Amid the rejoicing multitudes he walked melancholy and dejected, perhaps contrasting with secret contempt the conquest which swelled every bosom with rapture, with that nobler and bloodless victory, which he felt destined to achieve over the unbounded ocean, and musing on the vast realms he was to subjugate to the cross.

The monarchs were faithful to their promise. Persons of confidence were appointed to negotiate with him, but an unexpected difficulty arose. Columbus demanded princely stipulations for himself, worthy of the vast empire he had to bestow. He was to be invested with the title and privileges of admiral and viceroy, over the countries he should discover, and receive a tenth of the gains either by trade or conquest. These terms were at

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Christopher Columbus before the Council of Salamanca.

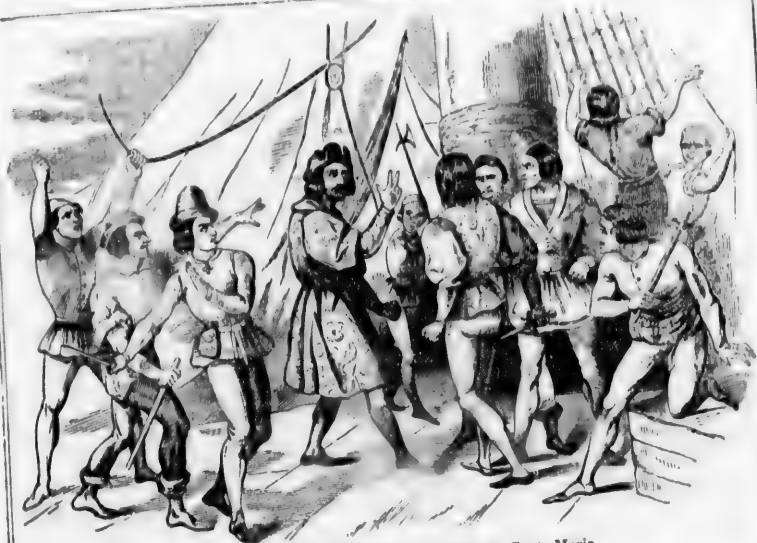


once rejected as degrading to the dignity of the crown, but Columbus would accept of nothing less, and again mounting his mule, took his departure for Cordova (February, 1492), resolved to proceed immediately to France. In this emergency, Luis de St. Angel, receiver of the revenues in Aragon, determined to make one bold effort to prevent this irreparable loss, and dishonour to the nation. He obtained an audience of the queen, pointed out to her how small the risk compared to the probable gain, how much this enterprise might advance the glory of God, exalt the church, and extend her own empire; and what cause of regret it would furnish to her friends, of triumph to her enemies, should it be accomplished by some other power. He urged these and other arguments, till Isabella declared her resolution to undertake the enterprise, but Ferdinand looked coldly on the affair, and represented the exhausted condition of the treasury. But the queen's enthusiasm was now roused, and she exclaimed, "I undertake this enterprise for my own crown of Castile, and will pledge my jewels, to raise the necessary funds." St. Angel offered to advance the money, but this was not required, and the funds really came from the revenue of Aragon, Ferdinand's own kingdom. A messenger on horseback was sent after Columbus, who overtook him two leagues from the city, and with some difficulty persuaded him to return.

Columbus was now received with great kindness, and in an audience with the queen, interested her deeply in his success, by expatiating on the opportunities offered for extending the Christian faith. Ferdinand continued cold as usual, and smiled at the pious suggestion of Columbus, that the treasures won from his discoveries should be consecrated to recover the holy sepulchre from the power of the infidels. The terms finally agreed to were—that Columbus and his heirs should enjoy the office of admiral and governor in all the countries he discovered, and be entitled to a tenth of all the gold, silver, precious stones, and other merchandise gained within his admiralty; or, on contributing an eighth of the cost, to an eighth of the profits. This agreement was signed on the 17th of April, 1492, at Santa Fé, near Granada, and on the 30th of that month, an order was issued to the town of Palos, to have two caravels ready for sea in ten days, to be placed under the command of Columbus. His son, who in the meantime appointed page to the young prince. Thus, at last successful, after many weary years of poverty, neglect, and bitter ridicule, Columbus returned to Palos in his fifty-sixth year, to prepare for his great enterprise.

But his difficulties were not yet at an end. When the royal order was read at Palos, universal terror prevailed, and the boldest mariners refused to take part in an expedition devoted, as they believed, to certain destruction. The royal mandate, the persuasions of Columbus, the influence of the prior, were alike disregarded. On the 20th of June, a new order was issued, empowering the magistrates to press into this service any vessels or crews they might think proper; but this expedition was no less fruitless. At last Pinzon, already mentioned as a supporter of Columbus, came forward, and with his brother, not only furnished one vessel, but offered to accompany the expedition. Their example and influence encouraged others, so that three small vessels were ready for sea within a month. Only one of them was fully decked, the others were open in the centre, but built high at the prow and stern, with cabins for the accommodation of the crew. Columbus commanded the largest vessel, Martin Pinzon the second, with one of his brothers as pilot, and a third brother had command of the third vessel. The whole company consisted of one hundred and twenty persons, of whom ninety were sailors. Before setting sail, Columbus confessed himself to the friar Juan Perez, and partook of the communion, in which he was joined by most of his associates.

On Friday, the 3d of August, 1492, half an hour before sunrise, Columbus sailed from the bar of Saltes, a small island opposite the town of Huelva, on this memorable expedition. He directed his course first for the Canaries, where he arrived on the 9th, and was detained for three weeks repairing one of his vessels, which was already injured, probably by its owners. When sailing past Tenerife, an eruption of its volcanic peaks terrified his crew, ready to interpret every event into a portent of disaster. Columbus reassured them by pointing out its natural cause, being more concerned by a report he heard at Gomera, where he had stopped to take in provisions, that three Portuguese caravels, were cruising about with an intent to capture him. On the 6th of September, he left this island, but was delayed by calms, so that it was the 9th of that month before they lost sight of Ferro, the farthest west of these islands. Then it is said the hearts of many of the crew failed them; they burst into tears and loud lamentations, at thus taking leave, as for ever, of home, family, and friends, and plunging headlong into the unknown dangers of the trackless ocean. Columbus encouraged them by pictures of the wealth and splendor of the regions they were about to visit, and promises of rich rewards. He issued orders to the commanders of the other vessels in case



Columbus quelling the Mutiny on Board the Santa Maria.

of separation, to sail due westward, for seven hundred leagues, when, as land might then be expected, they were to sail only during the day. He also, to deceive his crew, kept two reckonings of the ship's course, one correct for his own use, the other in which a number of leagues were daily subtracted from the sailing of the ship, open to the inspection of all. On the 11th of September, the sight of a broken mast, anew excited the terror of his sailors. Two days after, he for the first time, observed the variation of the compass, which no longer pointed to the pole-star, but gradually varied more and more to the west. He could not conceal this phenomenon from the pilots, who, not without reason, feared that the compass was about to lose its virtue, and to leave them without a guide in the pathless ocean. Columbus, for whose skill as an astronomer they had great respect, quieted their minds by telling them that the compass remained unchanged, its apparent motion being caused by the revolution of the north star round the true pole—an explanation not satisfactory to his own mind.

The ships were now in the region of the trade-winds, which blowing steadily from the east, so that for many days they did not require to shift a sail, waited them rapidly on their way. Land birds occasionally appeared, cheering the sailors with the hope that their voyage was near its end. The soft balmy air

is compared to the pure mornings in April in Andalusia, wanting only the song of the nightingale to complete the illusion. Soon after they reached the large patches of floating seaweed, now known to cover many thousand square miles in this part of the Atlantic. The sailors regarded this as another sign of land, and the crews were in high spirits, striving who should catch the first sight of it. Some clouds in the north, and the flight of a great number of birds, were also thought to indicate that it might be found in that quarter. But Columbus, firm to his purpose, steered boldly to the west, where alone he was convinced India was to be found. New fears were however rising in the minds of his people; the vast tract of ocean they had passed, seemed to separate them for ever from Spain, while the constant unvarying wind which favored their progress, precluded all possibility of return. Columbus might have tried in vain to dispel their fears, had not new signs of land and a contrary wind added weight to his arguments. Some small birds also came singing to the ships in the morning, and flew away in the evening, which wonderfully cheered the sailors, who thought them too weak of wing, to have wandered far from land. Their fears from the calm were at the same time dispelled by a heavy swell of the sea without wind, which came so opportunely, that Columbus regarded it as sent by Providence to allay the

murmurs of his crew. Every new disappointment added to their discontent, and they were already talking of compelling him to return, or if he was positive in refusing, casting him into the sea. Though conscious of his danger, Columbus remained serene and confident, soothing and encouraging some, menacing others with signal punishment. One incident will show the excitement prevailing among the crews. The lightness of the winds permitted the vessels to sail so close, that the commanders could frequently converse together. On the 25th of September, Martin Pinzon affirmed that they must be near the island of Cipango, which the admiral had entered in his chart. This document, tied to a cord, was flung from the one vessel to the other, and Columbus was busy examining it, when Pinzon cried out, "Land, land, señor; I claim my reward!" and pointed to the southwest, where indeed there was an appearance of an island. Columbus fell on his knees, thanking God; and Pinzon, joined by the crews, repeated the "*Gloria in excelsis*." The joy of the people could not be restrained, and the admiral was forced to sail to the southwest, till the morning sun showed the land to have been only an evening cloud.

Similar deceptions repeatedly took place, and the crew, fearing that they had sailed between two islands without observing them, began to utter murmurs and menaces, when renewed signs of land revived their hopes. Even Pinzon, however, on the 6th of October, proposed that they should sail south; but the admiral maintained his course to the west.

On the morning of the 7th, land was again announced in the west, but melted away before the evening; and Columbus having now reached the distance where he expected land, or 750 leagues (2600 miles), consented to sail to the southwest to which he saw all the small land birds directing their flight in the evening. They continued three days in this direction, the indications of their approach to land always increasing in number. On the evening of the third day, the crew broke out in open defiance, but Columbus told them it was in vain to murmur, as he was determined to persevere; and next day the signs of land were so decisive, that every one was eagerly on the watch. In the evening, after singing the vesper hymn, and addressing the crew on the prospect of finding land that night, he took his place on the high poop of the vessel. Suddenly, about ten o'clock, he thought he saw a light glimmering in the distance; and calling a friend pointed it out to him. They called a third person, but it had disappeared, though returning afterward at intervals. At two in the morning, a gun from the Pinta, which, as the quickest sailor, usually kept the

lead, announced that land was in sight. A sailor, Rodrigo de Triana, claimed the reward, but it was subsequently adjudged to Columbus, as having previously seen the light. Land was now clearly seen, when they shortened sail and lay to till the dawn. What must have been the feelings of Columbus in these few hours, when the vision that had haunted him for so many years, for which he had toiled and labored, enduring poverty, reproach, and ridicule, was about to be realized—when the barrier of the ocean was to be broken down, and a new world laid open to civilized man!

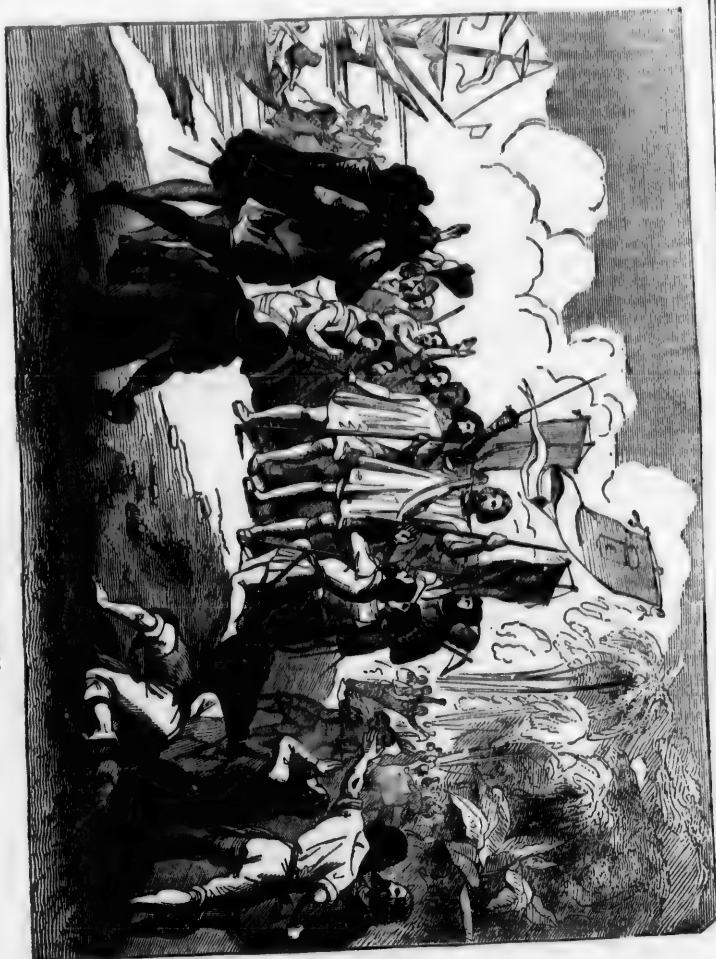
On the morning of Friday, 12th of October, 1492, Columbus first saw the New World. A low island, densely covered with trees, among which numerous naked savages were running to and fro, as if lost in astonishment, lay before him. He cast anchor, and with the two Pinzons put off for the shore in their boats. On landing, Columbus threw himself on his knees, kissed the earth, and returned thanks to God with tears of joy. He then took possession of the island for his sovereigns, and named it San Salvador. The crew had now passed to the opposite extreme of exultation, and were loud in professions of fidelity, and entreaties of pardon for the past. The natives, meanwhile, watched them with trembling anxiety, but at last ventured to approach their guests, whom they fancied had come down from heaven, while their ships seemed to them monsters inspired with life. Their copper-colored and painted skins were equally new to the Spaniards; while their simplicity, gentleness, and confidence, were not less pleasing. Columbus examined the island, but found no articles of commerce, and only a few ornaments of gold, which the natives seemed to intimate were procured in the south. On the evening of the 15th, he sailed south, among the Bahamas, landing on several, and everywhere treating the natives with great kindness. The Spaniards were delighted with the rich vegetation, the beautiful climate, and the novelty of everything they beheld, but disappointed at the scarcity of gold, or other valuable metals. At last the admiral reached Cuba, whose lofty mountains and fertile plains reminded him of Sicily, though far surpassing that island in the tropical luxuriance of the vegetation, and the brilliant plumage of the birds that thronged its woods. Columbus believed this island to be the Cipango of Marco Polo, or perhaps the continent of Asia, and was in constant expectation of finding gold, or reaching the court of the Grand Khan. He sent messengers into the interior, but they returned without discovering gold or spices, or any trace of the great monarch. They however noticed the potato,

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Columbus taking Possession of the New World.



and soon after were astonished by observing the natives rolling up the tobacco in a leaf, setting it on fire, and inhaling the smoke. Thus early were these two most important gifts of the new to the old world, noticed by its discoverers.

From Cuba, Columbus ran eastward in search of a large island, which the Indians seemed to indicate as existing in that quarter. Adverse winds delayed the voyage, during which Pinzon deserted him, his vessel being the best sailer, and set out in search of some region of vast wealth, to which one of the natives offered to guide him. On the 5th of December, Columbus descried land in the southeast, with high mountains rising from rich plains, and covered with lofty forests. This was the beautiful island of Hispaniola, as the Spaniards named it, from the similarity to the finest parts of their native land, or Hayti, as it is now called. Many natives were seen at a distance, but all fled to the mountains on the Spaniards' landing. At length communication with them was established, when they were found a fairer and handsomer race than in the previous islands; but no less mild and hospitable, and ready to propitiate their heavenly guests with their simple gifts. Columbus sailed along the coast, in constant admiration of the beauty of the country, and the mildness of the sky. On the 24th of December, Columbus set sail to visit a cacique, who had sent him some presents. The light winds prolonged the voyage; and, in the evening, the admiral retired to rest, supposing there was no danger. But no sooner had he left the deck than the steersman gave the helm in charge to a boy, and with his comrades of the watch lay down to sleep. The ship was borne aside by the currents, and struck on a bank over which the waves were breaking with much fury. Columbus was first on deck, and ordered the master and sailors to carry out an anchor to warp the vessel off; but instead of obeying, they rowed away to the other caravel, leaving their commander in imminent peril. Here they were reproached for their desertion of their vessel, and forced to return with another boat, but too late to save the ship, which was carried more and more among the breakers. The crew took refuge in the other vessel: and next day, with the assistance of the Indians landed all their goods. The conduct of the natives was admirable in the extreme, for nothing was amissing among treasures, in their opinion, of inestimable value. The cacique visited the admiral, and endeavored to console him for his misfortune; and a trade was established with the natives, who freely bartered gold dust for hawk's bells and other trifles. Many of the sailors charmed with the

idle life of the natives, entreated to be allowed to remain on the island; and Columbus, willing to lay the foundations of a new colony, complied. He erected a fort from the wreck of the caravel, receiving eager assistance from the natives—little dreaming of the yoke they were preparing for themselves. The cacique continued to load Columbus with gifts, especially gold, having soon discovered the high estimation which was entertained for this metal. In ten days, the fortress named La Navidad, or the Nativity, in memorial of their shipwreck on Christmas-day, was completed, and thirty-nine men chosen to remain. Columbus charged them to maintain friendly relations with the natives—to keep united in large parties—and to endeavor to obtain a knowledge of the mines which he had heard existed in the island. On the 2d of February, 1493, he paid a farewell visit to the cacique, and exhibited a mock fight among his crew, to impress the natives with a due sense of their prowess. The thunder of the artillery, and the destruction which the stone balls produced in the forests, struck them mute with awe and admiration.

On the 4th of January, Columbus sailed on his return to Spain, and in a few days met the Pinta, whose commander endeavored to excuse his desertion as involuntary. The admiral listened with silent incredulity, not wishing to give rise to any altercation. Pinzon had been for some time in Hispaniola, where he had collected much gold, and shared it with his crew to insure their silence. They now sailed along the coast, where fresh proofs of Pinzon's duplicity appeared, which the admiral wisely left unnoticed. Some days after they reached the gulf of Semana, whose shores were inhabited by a bolder and more warlike race. In a quarrel several of them were slain, the first blood shed by Europeans in the Western World; but Columbus gained the friendship of the chief. Some of the Indians offered to guide him to a large island inhabited by the Caribs, and he set sail for it; but a favorable wind from the west having sprung up, he bore away direct for Spain, dreading the mutinous temper of his crew, and anxious to secure the discoveries he had already made.

The favorable wind soon died away, and they experienced much opposition from the trades, till they got so far north as to be beyond the region where they prevail. The pilots had lost all knowledge of the ship's course, and thought themselves much nearer Spain than they truly were. Columbus did not undeceive them, though aware of their real position. On the 13th of February, they were involved in a hurricane, which continued with great fury for several days. They now

separated in the night from the Pinta, and lots were cast to decide which of the crew should go on pilgrimages if their lives were saved, two of these falling on the admiral. To secure, at least, a chance of preservation to his discoveries, he wrote an account on parchment, which he enclosed in a wax-cloth, addressed to the king, with a promise of a reward of a thousand ducats should it be delivered unopened. He then placed it in the centre of a cake of wax, and enclosing the whole in a large barrel, committed it to the sea. On the 15th land was descried; but two days elapsed before they could reach it, when it proved, as Columbus had affirmed, one of the Azores, named St. Mary's, belonging to the Portuguese.

Columbus sent some of his men on shore, who brought back a friendly message from the governor. Next day, however, when half the crew went on shore to perform a vow made during the storm, the Portuguese detained them, and another storm arising, the admiral had to put out to sea in great danger with his crazy, half-manned bark. He returned in two days, when his men were restored, and informed him that the governor had acted by orders from the king of Portugal, who had charged all the governors of distant islands and ports to seize and detain him. Columbus having taken in wood and water, set sail for Spain, but new storms arose, which shattered his vessels so much that, notwithstanding his well-founded dread of the Portuguese, Columbus was glad to run into the Tagus, where he anchored on the 4th of March. He sent off a messenger to the king of Spain with the news of his arrival, and another to the court of Portugal, requesting liberty to take his vessel up to Lisbon. In this city the account of his discoveries excited an extraordinary sensation, and Columbus was soon after invited to the court. This he would willingly have declined, but the tempestuous weather would not allow him to put out to sea, and he was obliged to comply. He was received with much magnificence, but the king was evidently greatly mortified by the thought that this splendid enterprise had been formerly refused when offered to himself. He consulted his counsellors on the subject, some of whom even suggested that Columbus should be assassinated, as trying to embroil the two nations by pretended discoveries, but the king had sufficient honor to reject this expedient, while he resolved to fit out a private armament, and take possession of the new country. Columbus was allowed to depart, and reached Palos on the 15th of March, which place he had left on the 3d of August, the previous year. It has often been remarked, that had he encountered half the difficulties

and storms on his outward voyage which assailed him on his return, he would inevitably have been compelled to desist, and this great discovery have been deferred to an indefinite period.

At Palos, Columbus was received with shouts of joy, and his passage along the streets resembled a triumphal procession. The same evening, Pinzon, who had also escaped the tempest and touched at the port of Bayonne, whence he had sent a letter to the court, with the news of his discovery, also entered the harbor. When he heard of the enthusiastic reception of Columbus, his heart sunk within him, all his treachery and evil conduct rose before him, and, dreading to meet his injured commander, he repaired privately to his dwelling, downcast and broken in health. A severe and reproachful reply to his letter to the king increased his dejection, and in a few days after he died of envy and remorse. As Washington Irving beautifully observes, "his story shows how one lapse from duty may counterbalance the merits of a thousand services; how one moment of weakness may mar the beauty of a whole life of virtue; and how important a matter it is for a man, under all circumstances, to be true, not merely to others, but to himself."

The Spanish court was now at Barcelona, and Columbus, while waiting orders, repaired to Seville. Here he received a letter requesting his immediate presence at court, and desiring him to make arrangements for a second voyage, as the summer was now at hand. Having complied as far as possible with the latter request, he set out for the court, taking with him six Indians and several curiosities he had brought home. His road was crowded with joyful and wondering multitudes, and he entered Barcelona in a procession that has been compared to a Roman triumph. He was received by the king and queen in great state, and when he knelt down they raised him up, and ordered him to sit in their presence—a mark of rare honor in that ceremonious court. He was then requested to give an account of his voyage, at the conclusion of which the whole assembly sank on their knees, giving thanks to God for the discovery of a new world, and the anthem of *Te Deum* was sung. Columbus was for the moment the object of universal curiosity, applause, and admiration. Nor was this feeling confined to Spain, but responded to with general exultation over the whole civilized world of Europe. As yet the sudden splendor of his discovery overpowered all feelings save those of joy and exultation.

The Spanish sovereigns took every measure fitted to secure possession of their new discoveries. An envoy was sent to the pope,

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who granted a bull ceding to them all the rights, privileges, and indulgences, which had formerly been accorded to the Portuguese in their African discoveries, on the same condition of planting and propagating the catholic faith. Another bull was issued on the following day, containing the famous line of demarcation between the territories of the rival monarchs, by a line from pole to pole, passing a hundred leagues west of the Azores. This has been frequently quoted as a proof of his holiness' ignorance of the true form of the earth, but perhaps only shows that he did not anticipate the possibility of the circumnavigation of the globe. The negotiations with the court of Portugal were more difficult and tedious, each of the princes endeavoring to deceive and outwit his rival. After repeated embassies, the matter was, however, arranged on the 7th June, 1494, the papal line of partition being moved three hundred and seventy leagues west of the Cape Verde islands, and the territory on the west assigned to Spain, that on the east to Portugal. Meantime, Columbus was hurrying on his second expedition, afraid that the Portuguese should anticipate him by a secret attempt. To aid him, a board was appointed under Juan de Fonseca, archdeacon of Seville, and afterward patriarch of the Indies. Fonseca is represented as a worldly man, of a vindictive disposition, to gratify which he did not hesitate to sacrifice the interests of his master. He soon conceived a most rancorous hostility to Columbus, which occasioned him many vexations and delays, and proved highly injurious to the interests of their common master.

A fleet of seventeen vessels was soon ready at Seville, containing many skilful mechanics and miners, and loaded with horses, domestic cattle, grain, sugarcane, and other plants. The number of persons had been limited to a thousand, but such was the eagerness of volunteers, that fifteen hundred eventually sailed, eager to engage in the new field of adventure, and reap a portion of its golden fruits. All the titles and privileges promised to Columbus were confirmed, and his powers in the new world even extended. Under such altered circumstances did the admiral leave Cadiz on the 25th of September, on his second voyage to the Indies; his companions, no longer forced on board like condemned criminals devoted to sure destruction, but glad and rejoicing in their good fortune in being permitted to join the glorious enterprise. On the 5th of October, the fleet anchored at Gomera, one of the Canaries, and increased their live stock by various purchases, among which Las Casas mentions eight hogs, the fertile parents of the innumerable multitude of swine

dispersed through the Spanish colonies. After being becalmed for some days among the Canaries, Columbus kept further south, and thus out of the region of seaweeds, which had so much encouraged his sailors on their former voyage. The tradewinds again bore them gently along, till the end of October, when they were awestruck by one of those tremendous thunder-storms common in the tropics. The electrical fluid, adhering with lambent flames to the top of the masts, revived their spirits, as the sailors, according to an old superstition, thought it was St. Elmo with seven lighted tapers—a sure proof that no danger would befall them. On the 2d of November, Columbus thought he saw signs of land, and early next morning a lofty island appeared, to which he gave the name of Dominica, as it was discovered on a Sunday. This event was celebrated by loud anthems of praise and thanks to God for guiding them in safety over the mighty ocean.

Columbus had reached the Antilles, a beautiful group of small islands shutting in the Caribbean sea. After touching on one island which was uninhabited, they landed on another, named Guadeloupe, with a lofty mountain, from which streams of water broken into white foam descended. The natives had all fled, but their tents contained articles of earthenware, bows and arrows, plenty of provisions, domesticated geese, and beautiful parrots. Numerous human bones and skulls, apparently used as vases, filled the Spaniards with horror, and some women whom they took captive on the following day, informed them that the natives, whom they named Caribs, were in the habit of killing and eating their prisoners. The captain of one of the ships, with eight men, had lost themselves in the woods, and Columbus entertained great apprehensions that they had fallen victims to the savages. Fortunately, however, the Carib warriors were all absent on some predatory expedition, and the stragglers returned just when the fleet was about to sail without them. Columbus proceeded to the north-west, being anxious to learn the fate of the colony left at Hispaniola, passing many islands on his way. At Santa Cruz a boat was sent on shore for water, and on its return intercepted a canoe with a few Indians, who came suddenly round a point of land between it and the ship. After a desperate resistance, in which one of the Indians was killed, and their canoe destroyed, the others were captured and brought on board the ship, where their fierce untamed demeanor, so unlike the gentle manners of the natives of Hispaniola, struck the Spaniards with astonishment. They passed many other islands, among them Porto Rico, where they landed, but saw none of the natives, who

were always at war with the Caribs. The latter people, said to have spread from the Appalachian mountains over the whole chain of the West India islands, and thence even to the mainland of Brazil, were the scourge of the more peaceable and unwarlike tribes, though the reports of their cannibalism were probably false or greatly exaggerated.

On the 22d of November the fleet reached the eastern point of Hispaniola, and the admiral hoped soon to arrive at the fort where he had left his followers on the former voyage. On passing the gulf of Samana, the scene of his former combat with the natives, a young Indian, who had accompanied him to Spain, was set on shore, as a messenger of peace to his countrymen. No account was ever received of him afterward, and he was not improbably sacrificed to their avarice or jealousy. On the evening of the 25th the fleet reached La Navidad, but it was already too dark to approach the coast or discern the fort. Two guns were fired as a signal to their comrades, but no answer was returned, no sign of life was to be seen on the coast. A canoe soon after appeared, and the Indians, on seeing Columbus, came on board. They told him that some of the Spaniards left in the fort had died of sickness, that others had been killed in quarrels among themselves, and the remainder had removed to another part of the island. Next day none of the natives appeared, and on landing, a burned and blackened ruin alone marked where the fort had stood. Continuing their researches, they next discovered a grave containing eleven bodies, which proved to be those of Europeans. At last some Indians were met with, from whom the fate of the garrison was ascertained. The Spaniards were hardly relieved from the authority of the admiral, than they began to abuse the poor natives, robbing them of their property and seducing their wives and daughters. Then they quarrelled among themselves, disobeyed the orders of their commander, and dispersed themselves over the country. Eleven of them set out for the dominions of Caonabo, a warlike chief of Carib origin, who ruled over the gold mountains in the interior, where they expected to find immense wealth. They were seized immediately on entering his dominions and put to death, and Caonabo resolved to rid the island of the strangers. He made a descent on the fort, and attacking it during the night, had full possession before the few men remaining in it were aware of their danger. The whole of the Spaniards were slain, and the village of the neighboring Indians, who attempted to defend them, buried to the ground. The history of this first European settlement is an epitome of many that have followed—of the

base vices and lawless abuse of their superior power, by men boasting of their civilization—of the fierce revenge of the savage, his momentary success, his final destruction.

The cacique or chief of the Indians soon after sent a message excusing his absence, and stating that he was confined to his tent by a wound received in defence of the Spaniards. Columbus visited him, when he related the misfortune of the garrison, with tears in his eyes, and convinced the admiral of his good faith, though some of his followers were of a different opinion. The cacique afterward visited the ships, where he was lost in astonishment amid the new and unknown objects that he beheld. The horses especially, their great size, their apparent fierceness yet perfect docility, filled with amazement men who knew only the most diminutive quadrupeds. The females rescued from the Caribs were also a special object of attention, in particular one distinguished by her lofty air and manner, with whom the cacique conversed repeatedly. After a repast the chief begged permission to return on shore, perhaps feeling uneasy at the dark auspicious looks of the Spaniards, some of whom advised Columbus to retain him prisoner. Next day the brother of the chief came on board and conversed for some time with the women. He was probably concerting their escape, as in the night they all slipped overboard, and, though heard and pursued, swam to the land, three miles distant, and escaped. Next day, when Columbus sent on shore to reclaim them, he found the village deserted and the natives fled into the interior. Columbus left this place, where there was now no inducement to remain, as the locality seemed unhealthy and unfit for a permanent settlement. When looking for a situation adapted for this purpose, he was driven by adverse weather into a harbor, and being pleased with its appearance, and hearing that the mountains of Cibao, containing gold mines, were at no great distance, he resolved to found a city, named Isabella from his royal patroness. A plan was formed, and preparations begun, when disease broke out among the Spaniards, already suffering from their long confinement on shipboard, and unaccustomed to the climate of the tropics. Disappointment, too, increased their maladies, when their golden dreams melted away, and the necessity of hard labor appeared. Even Columbus suffered from exposure to the climate and the numerous anxieties in which he was involved. Still, though confined to his bed, he continued to direct the affairs of the expedition and the building of the town. The ships had now discharged their cargoes, and were soon to return to Spain, but no merchandise was provided, and

no treasure even ascertained to exist. The golden mountains were, however, at no great distance, and Don Alonzo de Ojeda, one of the most adventurous of his followers, set out with a party to explore them. They found the natives friendly, the sands of the mountain streams glistened with particles of gold, and fragments weighing several ounces were collected. With these glad tidings he returned to the admiral, who now sent home twelve ships, retaining five for further discoveries. As yet Columbus had only promises of wealth to give in return for the supplies he requested to be transmitted from Spain. Till articles of more value could be procured, Columbus proposed sending home Carib slaves in return for live-stock, but Isabella refused her consent to this inhuman project. Though no wealth was brought back by the fleet, still the reports of the gold mines prevented that disappointment whose effects the admiral so justly dreaded.

On recovering from his illness, Columbus was about to set out to explore the interior, when he discovered a plot among a portion of his followers to seize the ships and return to Spain, where they hoped to find forgiveness by accusing their chief of deception. The ringleaders were arrested, the chief, Bernal Diaz, confined, in order to be sent to Spain for trial, and some others punished less severely than they deserved. This act of authority formed a new ground of offence, and excited the national feelings of the Spaniards against the foreigner, as they regarded Columbus. On the 12th of March, however, he set out for the interior, with about four hundred men, leaving the command of the town and fleet to his brother Diego, a man of an easy and facile disposition. On reaching the summit of the first range of mountains, the Spaniards were lost in admiration of the beautiful plain, which extended like an earthly paradise before them. Through this region, which he named the Vega Real or Royal plain, Columbus continued his march, being everywhere hospitably received by the Indians, when their first terror at the strange spectacle was overcome. On the second day he reached another chain of mountains, higher and more rugged, but as they were now in the golden region, Columbus, before penetrating further, resolved to erect a fort and commence to work the mines which he believed to exist. The fort, named St. Thomas, was built on an eminence, protected by a small river. Here he left fifty-six men, and set out on his return to the coast, halting some time, however, in the Indian villages on the way. He thus acquired more knowledge of the manners of the natives, some of whose customs and opinions are very curious. He at

first regarded them as atheists, but soon found that, besides a belief in one supreme deity, they had also many inferior gods, some the peculiar guardians of each tribe, others allotted to watch over every special department of nature. They had also priests or magicians; and some imperfect notions of the creation of the world and universal deluge. They believed that mankind originally came out of a certain cave; large men from a large hole, and the small men from a small one; and that they had no women among them at first, but at last found them among the branches of a forest near a small lake. The ladies were, however, as slippery as eels, so that the men could not for a long time catch any of them; till some whose hands were rough with a kind of leprosy, succeeded in securing four of these slippery females. The natives appeared an idle, careless race, living chiefly on the spontaneous produce of their woods and rivers.

On reaching Isabella, Columbus found the sickness continuing, the stores of provisions almost consumed, and discontent and disappointment very prevalent. The last were greatly increased when he required the cavaliers to aid in erecting certain public works of immediate necessity, the proud hidalgos considering all labor as a degradation. These circumstances greatly embarrassed Columbus, who was desirous of proceeding on another voyage of discovery. He therefore sent all the persons who could be spared into the interior, under the command of Pedro Margarite, with orders to explore the country. He gave strict charges to treat the Indians with kindness, justice, and caution; to respect their property and persons, except Caonabo, the Carib chief, whom they were to seize by stratagem. An incident that now occurred convinced him that there was little to fear from the natives. A horseman, returning from the interior, found five of his countrymen captive among a crowd of Indians. Though more than four hundred in number, the sight of his horse put them all to flight, and he brought off his friends in triumph. Leaving his brother Diego governor in his absence, Columbus sailed in the three smallest vessels in search of new lands.

He first proceeded west, and in five days came in sight of the east end of Cuba. He coasted along it for a short way, but learning from the natives that a country rich in gold was to be found in the south, he turned in that direction. The blue summits of Jamaica soon rose above the horizon, and on drawing near land they were met by a fleet of seventy canoes full of gayly-painted savages, decorated with feathers, and brandishing their wooden lances with loud yells. A few presents pacified this angry armada; but next

day, when he entered a harbor to careen his ship, he found the whole beach covered with hostile Indians. Wishing to inspire them with terror, in order to prevent all future molestation, the admiral caused some boats to row close to the shore; the Spaniards let fly a volley of arrows from their cross-bows, and then springing to the land pursued the multitude. A fierce dog was then let loose on the Indians, the first instance of the employment of these animals against the natives. Subsequently, intercourse was established with the Indians, who were more warlike and ingenious than those of Hayti, and possessed larger canoes. These were hollowed from a single tree, and one of them measured ninety-six feet long by eight broad. After a few days, Columbus, finding no signs of gold, returned to Cuba. Here he was involved among a vast multitude of small islands, which rendered navigation very dangerous and difficult. He, however, named them the Queen's gardens, from the verdure with which they as it were covered the surface of the sea. Some of these islands were inhabited, and Columbus was much amused by a method the natives employed in fishing. They attached a long line to the tail of a small fish with a flat head furnished with numerous suckers. They allowed it to swim about, when it generally kept near the surface, but on perceiving a large fish, would dart on it, and fixing itself firmly by its suckers, would retain its hold till both were drawn out of the water. Besides fish, the Spaniards saw large tortoises caught in this way, which it appears is also practised on the east coast of Africa. Columbus continued his voyage along the southern shore of the island, which he believed to form part of the Asiatic continent. In this navigation he encountered many difficulties from the numerous sandbanks and keys or small islands. At last, being fully convinced that he had reached a continent, and fearing the exhaustion of his provisions, and the shattered condition of his vessels, he determined to return. After getting free of the small islands, he cast anchor at the mouth of a river in order to refresh his men, harassed by their long voyage and anxieties. From this place he intended to return direct to Hispaniola, but was forced by contrary winds to the coast of Jamaica, along which he sailed, having frequent intercourse with the natives. Thence he reached the shores of Hispaniola, where he was soon recognised by some of the natives, among whom his fame was widely spread. After sailing along its southern side, he came to a region already explored, but intended to continue his researches further east among the Caribbean islands. The hardships, exertions, and anxieties, of his five months' voyage, had, howev-

er, exhausted his mental and bodily powers; he was struck with a sudden malady which deprived him of memory, sight, and all his faculties, and the crew, alarmed at the deep lethargy of the admiral, abandoned all thought of prosecuting the voyage, and bore away direct for the harbor of Isabella. Here Columbus rejoiced to meet his brother Bartholomew, who had arrived from Spain with supplies, but found the affairs of the island fallen into the utmost confusion during his absence.

Columbus, before departing on his voyage, had, as we mentioned, given the command of his troops to Margarite, with orders to explore the island. Instead of obeying these orders, Margarite quartered himself and his followers among the natives of the Vega, whom he oppressed and abused in all possible ways. To the remonstrances of the council and Diego Columbus, he paid no attention, but at last, fearing the investigation of his conduct on the return of the admiral, he resolved, with his associates, to seize some of the ships and return to Spain. He was joined in this scheme by Friar Boyle, to whom the religious superintendence of the colony had been committed. Deserting their posts, they had sailed for Spain, leaving the army without a head and without discipline. The men became bolder in their abuse of the natives, till the latter, roused to resentment, began to take secret vengeance on their oppressors. Scattered parties and individuals were put to death, and success in these attempts led to bolder undertakings. Caonabo resolved to attack the fortress, built without permission on his territories, and now garrisoned by only fifty men. They were commanded by Alonzo de Ojeda, who to great natural bravery, added much military skill, acquired in the Moorish wars. Caonabo assembled ten thousand warriors, but found his adversary on his guard, and being unable to force so strong a fortress, endeavored to reduce it by famine. After a thirty days' siege, in which many of the Indians perished, he was obliged to withdraw, but meditated an attack on the town, weakened by the dispersion of the troops and the sickness of those who remained. He made a league for this purpose, with three other chiefs, but Guacanagari, the first friend of the Spaniards, whose dominions were nearest the town, remained faithful to them, and delayed the attempt. He thus brought on himself the hostility of the confederates, who plundered his country and killed many of his subjects. Columbus took various measures to quiet the island, punishing some of the chiefs, and gaining others by conciliatory treatment. From his most dangerous enemy Caonabo, he was freed by a daring stratagem of Ojeda, who with ten horsemen ventured into the camp of

the chief on a pretended friendly mission, and having by false representations induced the simple Indian to mount behind him, and suffer himself to be adorned with polished shackles, bore him off in triumph from among his astonished warriors. This deceit, however contrary to our feelings, seems to have been viewed in a different light by the victim, who, when a captive, always showed the highest respect for Ojeda, while he proudly refused all marks of deference for Columbus, though well aware of his superior rank. Another important event for the colony was the arrival of Antonio Torres, with four ships loaded with provisions, and accompanied with many workmen and mechanics. The despatches from court were still favorable; insidious enemies having not as yet poisoned the ear of the princes against Columbus. The admiral hastened the return of Torres, sending with him his brother Diego to support his interests at court, and to give his advice in settling the boundaries of their respective discoveries with Portugal. In the fleet was sent not only all the gold and other precious metals which he could procure, but also above five hundred Indian prisoners, whom he recommended to be sold as slaves at Seville. Thus early was begun that accursed trade in human flesh, which has produced more misfortune to mankind, than all the wars from that time to the present; and which is no less disgraceful to humanity, than the cannibalism of the savages, for which the Spaniards express such horror.

One of Caonabo's brothers, attempting to revenge his captivity, had been defeated by Ojeda, but this did not prevent the other chiefs from collecting their forces for his rescue. Columbus learning from the friendly Indians that they had assembled in the Vega, marched out to meet them, though his whole army only amounted to two hundred infantry, twenty horse, and the same number of bloodhounds, not the least dangerous opponents to the naked Indians. A battle, or rather massacre, took place in the Vega; the natives, who had trusted to their numbers, being at once dispersed by the fire of the infantry, and then cut down by the cavalry, or hunted like wild beasts by the savage dogs. Columbus followed up his victory, by subduing almost the whole island, and imposing a tax of a certain quantity of gold dust, or, where this was not produced, of cotton, on each of the natives. The chiefs remonstrated against this grievous burden, but in vain. Their people, seeing no hope of relief, deserted their fields, and retired to the mountains, hoping that famine might drive away their persecutors. But this only increased their severities, and after a large part of the Indians had perished by want and violence, the remainder returned to

linger under the yoke of slavery. Even the friendly Guacanagari, and his people were subjected to the same impositions and cruelties, till the chief, unable to endure the reproaches of his miserable subjects, retired to the mountains, and died in poverty—a victim to the strangers whom his hospitality had more than once preserved from destruction.

The malcontents who had returned to Spain, were not wholly unsuccessful in prejudicing the sovereigns against Columbus, who, as a foreigner, had no influence to support him at court. Even the arrival of Torres, with news of the discoveries made in the recent voyage, and the specimens of gold which he brought, did not restore Columbus to his former favor. Juan Aguado, was sent as a commissioner to investigate the affairs of the island, and though formerly highly indebted to Columbus, soon became his bitterest foe. On arriving at Isabella, he found the admiral absent in the interior, and immediately assumed high authority to himself and interfered in all public affairs. When the admiral returned from the interior, he received Aguado with all the courtesy due to the royal messenger; and when his inquiries were finished, intimated his intention of returning with him to Spain. Their departure was delayed by a tremendous hurricane, which swept over the island with such awful fury, that even the Indians thought it a divine judgment on the crimes and cruelties of the white men. It destroyed all the vessels in the harbor except one, left in a very shattered condition. While the vessels were repairing, Columbus received news of great importance. A Spaniard, Miguel Diaz, in the service of his brother Bartholomew, had wounded one of his comrades dangerously in a quarrel, and fearing the consequences, had fled to the south side of the island. Here he had won the heart of a female cacique, and lived with her some time very happily. But at length he became desirous of returning to his friends, and fell into deep melancholy. His Indian bride learning the cause, and desirous of drawing the Spaniards to her part of the island, that he might not thus be induced to abandon her, informed him that there were rich mines in the neighborhood. Diaz, having ascertained the truth of the report, returned to his master, who was easily reconciled to him, and set out personally to investigate the mines. He found them as rich as was reported, and deep pits near them, as if dug in former times, which gave rise to a curious conjecture of Columbus, that he had now discovered the ancient Ophir of Solomon. The tidings were indeed highly grateful to the admiral, both as decisive proofs of the wealth of the island, thus silencing the cavils of his enemies, and as an excuse for removing

the colony from its unhealthy situation. Diaz was pardoned, and employed in various duties, all of which he discharged with fidelity. He also kept faith with his Indian spouse, who seems to have become a Christian, and to have been baptized.

On the 10th of March, 1496, Columbus sailed for Spain, along with Aguado. Keeping too far south, within the tradewinds, his passage was long and tedious, so that he had to touch at Guadaloupe for provisions. The shores were only defended by the women, some of whom they took prisoners, but again set free before their departure. One heroine, however, refused her liberty, and chose rather to accompany Caonabo, whom Columbus was taking with him to Spain. But the Carib chief was destined never to arrive there; his proud heart was broken by his misfortunes, and he died on the voyage. During this voyage, the Spaniards were reduced to great extremity, some even proposing to kill and eat their Indian prisoners. On the 11th of June, Columbus at last reached Cadiz, after a weary passage of three months. His hopes and reception were very different from what they had been on his former return, three years before; and the miserable emaciated figures of his sickly companions, and their yellow countenances—a mockery, says an old writer, of that gold they had gone to seek—was no unfit emblem of the public disappointment. He however, received a friendly letter from the court, and on his arrival there met with a kind reception; his great merits not being yet wholly forgotten. He proposed to undertake a new voyage of discovery, which was readily agreed to; but numerous delays were destined to intervene before its accomplishment. Affairs of more immediate necessity demanded all the care and resources of the king, while envious councillors insinuated to him the great cost and small profit of the boasted discoveries. At length the influence of the queen procured certain measures favorable to Columbus, and adapted to promote the prosperity of the colony; but the management of Indian affairs was committed to his cold-blooded enemy, Fonseca, who persecuted him and embarrassed his proceedings by the meanest and most despicable artifices. "Absent, envied, and a stranger," as he said in a letter to the king, every one was against him, and it was only his gratitude to the queen that induced him to persevere.

At length, on the 30th of May, 1498, Columbus sailed with six vessels on his third voyage to the New World. He proceeded south to the Cape Verd islands. Thence he continued southwest, till his ship was involved in the region of the "calms," near the equator. Here the wind fell, and a dead, sultry

air, as from a furnace, hung over the ships, wasting their stores, and destroying the health and spirits of the men. He then altered his course more to the west, and reached land with his provisions nearly exhausted, and only one cask of water remaining in each ship. It was the island of Trinidad, which Columbus named from a vow he made to consecrate the first land he should reach to the Trinity. He coasted along the southern shore of the island, and was surprised at its fertility, at the coolness of the air, and the fair complexion of the natives—all so unlike the tropical character of Africa. He was now sailing in the strait between Trinidad and the mainland, on some parts of which he touched in the gulf of Paria, but without knowing that it was in reality the continent he had so long sought. The strings of pearls worn by the natives highly interested him as a new source of wealth, and a confirmation of his theories. His time, however, would not permit of further researches, so, retracing his way, he sailed through the narrow passage between Trinidad and Cape Boto in Paria, where the sea was raging and foaming, the currents being swollen by the large mass of fresh water then poured into the gulf. He passed through it, however, in safety, and examined part of the north coast of Paria, when he was compelled to sail for Hispaniola. He reached it considerably north of the point he wished, having been carried out of his reckoning by the strong currents. Sending a message on shore to his brother, he sailed for the river Ozema, and was soon met by his brother Bartholomew, who came off in a caravel to meet him. In a letter to the sovereigns, relating his voyage, Columbus enters into various speculations—some of them wild and fanciful in the extreme—concerning his new discoveries. He however rightly conjectured from the quantity of fresh water flowing into the gulf, that it must come from some continent of vast extent, which he still maintained to be a part of Asia.

From his brother, who had governed the island under the title of Adelantado, Columbus received an account of the events which had occurred during his long absence. Bartholomew had proceeded to found a fort near the mines of Hayna, discovered by his servant, but, from want of provisions, the work had made slow progress. He then laid the foundation of San Domingo, on the harbor at the mouth of the Ozema river, and leaving a small garrison there, set out to explore the western region of the island. He was well received by the cacique of that district, who readily agreed to pay an annual tribute of cotton, alleging that no gold was produced in his part of the island. On returning to Isa-

bella, he found nothing but misery and repining. The provisions received from Europe were consumed, the Spaniards, intent only on procuring gold, would not condescend to cultivate the ground, and yet, by their cruelties, had driven the natives to the mountains. The Adelantado sent all the men that could be spared into the interior, where the climate was more salubrious, and provisions in greater abundance. He then established military posts to overawe the natives, whose indignation was roused anew by fresh indignities. Two friars had labored with small success, to convert the Indians, who could not be persuaded that a religion was true, whose followers perpetrated such atrocities. In one place, the friars had built a small chapel, with crucifix, images, and altar, for the use of a family of converts. Some other Indians had, however, entered the chapel, and broken the images. For this crime the ignorant savages were tried by the ecclesiastical law, condemned, and burnt. This cruel treatment excited the indignation of all the natives, and a rebellion, to commence by a general massacre of their oppressors, was concerted. It was betrayed, as usual to the Spaniards; and, by a successful stratagem, the Adelantado seized fourteen of the assembled caciques, and carried them prisoners to a fortress. Two of the principal instigators of the insurrection were put to death, but the others were released—an act of clemency which for a time restored tranquillity to the Vega. Bartholomew then set out to the western extremity of the island, where he received for tribute sufficient cotton and provisions to load a caravel.

A new trouble arose from the machinations of one Francisco Roldan, who, raised from low rank to be chief judge of the island, now turned his influence against his benefactor. During the absence of the Adelantado, he excited mutiny against him among the Spaniards at Isabella, and, on his return, set out into the interior, where he had formed a friendship with the native chiefs, and hoped to seize one of the forts. Disappointed by the vigilance of the commander, he now endeavored to obtain possession of it by force. The Adelantado marched to its relief, but distrusting the loyalty of his men, durst not attack Roldan. He had an interview with him which led to no result, and Roldan, taking advantage of his absence returned to Isabella, entered it by surprise, and breaking open the royal warehouse, supplied himself and his followers with arms and clothing. He then returned to the Vega, endeavoring to seduce the followers of the Adelantado from their allegiance. Not succeeding in this, he again endeavored to stir up the natives to a revolt, and continued to sow discontent among the Spaniards. The

whole island was reduced to a state of anarchy, when two vessels arrived at San Domingo, in February, 1498, with supplies of provisions, troops, and what was of more importance, a royal confirmation of the authority of the Adelantado. Roldan had however, gone too far to hope for pardon, and feeling too weak for resistance, retired toward the west end of the island. The Indians in the Vega, seduced by his machinations, had taken up arms, but being defeated by the Spaniards, their chief fled to the mountains of Ciguay, where he found shelter with a brother cacique. Thither he was followed by the Adelantado, who, notwithstanding the difficulties of a mountain warfare, with savage foes, soon dispersed the Indians, and captured both the chiefs, who had sought shelter in the recesses of the mountains. Such was the state of the island when Columbus returned thither from Spain, and such the immediate results of that unwise policy, which the Spanish monarchs instigated by his private enemies, pursued toward him. The productiveness of the colony was ruined; discontent, disloyalty, and crime, fomented among the white settlers, and the poor Indians led into rebellions, in which they either perished miserably by the sword and famine, or were reduced to a state of cruel slavery, to which death in almost any form was preferable.

Such was the condition of affairs in Hispaniola, when Columbus returned from Spain. Instead of the paradise which it seemed when the white men first set foot on its soil it had become the abode of war, and sedition, of strife, famine, and pestilence. The native population was melting away before the baleful presence of the stranger; and their once hospitable towns were desolate and silent. The Spaniards, too, were now reaping the fruit of their crimes; vice had produced disease; indolence, poverty; while cruelty and oppression had turned the once friendly Indians into deadly foes, and the thickly-peopled country into a lonely wilderness.

Columbus endeavored to restore matters so far as it was still possible. He denounced Roldan as a rebel, but at the same time, offered him pardon on immediate submission. Roldan had, however, strengthened his party, by the accession of many criminals who had been sent from Spain at the same time as Columbus, but had arrived in the island before him, and now refused to submit. Columbus, surrounded by treachery and disaffection, was too weak to enforce compliance, and could only write home an account of the rebellion, and ask further aid. After various negotiations, an agreement was made with the rebels, by which they were to return within a limited time to Spain; and the admiral set out to in-

spect the island. Circumstances delayed the fitting out of the ships, and Columbus soon learned that new seditions had broken out among the rebels, who refused to leave the island. A cold letter from the court added to his perplexities, as it showed the power of his enemies there, and how little trust he could put in the royal favor. He had thus to comply with all the demands of the mutineers, and enter into a new arrangement, reinstating Roldan in his office of chief judge, giving grants of land to some of his followers, and sending others of them home to Spain. To both parties, Indians were assigned as slaves, and instead of tribute, the free natives were compelled to cultivate the land of the Spaniards settled in their vicinity. This treatment of the Indians, is one of the greatest stains on the memory of Columbus, and shows how little the rights of humanity and the duties of Christianity were understood in that age. By the same vessels that carried home the conspirators, Columbus sent letters to the king, detailing all that had occurred, showing that the sovereign was not bound by the engagements he had made with the rebels, and requesting aid to restore tranquillity, and a learned man to act as judge of the island.

Four vessels had been seen off the west part of the island, which Columbus learned were commanded by Ojeda, the bold cavalier already mentioned. He sent Roldan to inquire into this suspicious expedition, who gladly undertook the enterprise, as likely to secure possession of his ill-gotten gains. Roldan met Ojeda, and found that he had a license from Fonseca, that the vessels were fitted out as a private adventure, and that they had already sailed along the coast of the mainland, from two hundred leagues east of the Orinoco to the gulf of Paria. In this expedition was a Florentine merchant, Amerigo Vespuccio, destined to give a name to the whole of this new world. Ojeda promised to meet the admiral at San Domingo, but instead of this, as soon as he had collected provisions, he sailed to Xaragua, where many of the mutinous followers of Roldan were settled. These men chose him for a leader, and were about to march with him to San Domingo for a redress of their grievances, when their old leader, with a band of resolute followers, arrived in their neighborhood. Ojeda retired to his ships, and after various manoeuvres between two such well-matched opponents, had to leave the island, but not till he had landed in several places and plundered the poor natives. Ojeda it appears, afterward sailed to Porto Rico, and carried off numbers of the Indians, whom he sold in the slave market of Cadiz. Meantime another conspiracy broke out. Guevara, a young cavalier, had been banished from San

Domingo for his licentious conduct; but there being no vessel to take him to Spain, was sent for a time to Xaragua. Here he fell in love with a daughter of Caonabo, the Carib chief, and intended to marry her, when Roldan, it is said, from jealousy, interfered. Roldan first sent him to another place, but he returned, and on his submission was allowed to remain. He, however, engaged in a conspiracy, having for its object to kill Roldan, or put out his eyes; but the experienced rebel was beforehand with them, seized the ring-leaders, and sent them prisoners to the admiral. Guevara's uncle, Moxica, a former comrade of Roldan, incensed at this action, began to collect his old followers to free his nephew, but was anticipated by Columbus, who fell upon him suddenly, and seized him and his principal confederates. Moxica was put to death, some others condemned, but retained in confinement; and the Adelantado, seconded by Roldan, soon reduced the whole island to a state of tranquillity.

This, however, was not to continue long. The enemies of Columbus were busy at court, where his friends were few and powerless. Ferdinand had undertaken these discoveries from no high or generous motive, but moved only by hopes of wealth, which he now found greatly disappointed. Instead of receiving supplies from them, they were a constant drain on his treasury, already exhausted by his numerous wars. His disappointed avarice made him lend a ready ear to all the accusations brought against Columbus by the idle dissolute men who returned home. Many of these persons flocked to court, demanding arrears of pay, while their conduct in the colony had only deserved punishment. Their insolence may be judged of from the imprecations with which they saluted the two sons of Columbus, who attended court as pages to the queen. "There go," they would exclaim, "the sons of the admiral, the whelps of him who discovered the land of vanity and delusion, the grave of Spanish hidalgos!" The queen had long been his faithful friend, but her humanity was excited by the treatment of the Indians, whom Columbus persisted in sending home as slaves. She ordered them all to be returned to their native land, and gave her consent to a commission to inquire into the conduct of the admiral. One principal object of this appointment on the part of Ferdinand, was his wish to obtain some excuse for depriving Columbus of the high privilege with which he had invested him. Like many other wicked men, he sought to cover one act of ingratitude and injustice by adding to it another. The person chosen for this purpose was Francesco de Bobadilla, whom some represent as a very

honest and religious man, others, with more semblance of truth, as needy, passionate, and ambitious. He was empowered to examine into the late rebellion, and the government of the admiral and his brothers; and on finding them guilty, to supersede them in the administration.

With the latter part of this commission, Bobadilla was not long of complying. He reached San Domingo on the 23d of August, 1500, and having landed the next morning, ordered his commission to be read, authorizing him to investigate the late rebellion. Columbus was absent in the interior; but his brother Diego refused to give up the prisoners till his return, and asked for a copy of this letter to send to him. Bobadilla refused this, and the next morning read a second royal patent, investing him with the government of the island, and again demanded the prisoners. Diego replied, that he held the prisoners in obedience to the admiral, who was invested with higher powers, on which Bobadilla produced a third mandate from the crown, ordering Columbus and his brothers to deliver up to him all his houses, ships, and other royal property, and a fourth mandate, ordering him to pay all arrears of wages to the men in the royal service, which was received with shouts of applause by the multitude. He again demanded the prisoners, and when they were refused, repaired to the fort where they were confined. The alcade, Miguel Diaz, had the gates closed, and appearing on the wall, declared that he would only obey his lord the admiral. Enraged beyond measure, Bobadilla assembled his followers in order to storm the fort, which, having no garrison, he entered without resistance. He then took possession of the house of Columbus, and seized upon all his effects, books, and private papers. When information of these events reached the admiral, he considered them merely as the acts of some private adventurer, and moved toward San Domingo. He was met by an alcade, who proclaimed Bobadilla's accession to office; but the new governor took no notice of him, and did not even answer a letter he had written. Columbus was in great uncertainty how to act, when two messengers arrived with a royal letter of credence, commanding him to give implicit faith and obedience to Bobadilla; and presented at the same time, a summons from the latter to appear before him. Columbus at once obeyed, but on reaching the town was seized, put in irons, and confined in the fortress. When the irons were brought, no one was found to put them on him, till the task was undertaken by one of his own domestics, "a graceless and shameless cook, who riveted the fetters with as much readiness and alacrity, as though he

were serving him with choice and saving hands." His two brothers met the same fate, being also put in irons, and confined separately on board the *Trinidad*. Bobadilla never came to see them, or gave them any account of the crimes with which they were charged, so that in the admiral's own words, they "were thrown into a ship, loaded with irons, with little clothing, and much ill treatment, without being summoned or convicted by justice." Such was the reward Columbus received from his unworthy sovereign, whom it is in vain to defend by throwing the blame on the miserable instrument of his malice and ingratitude.

To justify his conduct, Bobadilla collected evidence from all quarters against the admiral and his brothers, to whom all the late mischances in the island were imputed. When the work was completed, he sent Columbus in charge of Alonso de Villejo, a captain of the officer. When he came to the harbor on board, Columbus knowing the treachery of his enemies, thought it was to lead him to the scaffold. "Villejo," said he sternly, "whither are you taking me?" "To the ship, your excellency, to embark," replied the other. "To embark!" repeated the admiral earnestly; "Villejo, do you speak the truth?" "By the life of your excellency, it is true," replied the honest officer. With these words the admiral was comforted, and felt as one restored from death to life. Such is the account of this touching incident, which Washington Irving has taken from Las Casas, who probably received it from his friend Villejo himself. Columbus left the island early in October, "shackled like the vilest of culprits, amid the scoffs and shouts of a miscreant rabble." Villejo would have removed his irons, but Columbus would not consent; they had been imposed by the authority of their majesties, and said he, "I will wear them until they shall order them to be taken off; and I will preserve them as relics and memorials of the reward of my services." "He did so," adds his son; "I saw them always hanging in his cabinet, and he requested that when he died, they might be buried with him."

When Columbus arrived in irons at Cadiz, from the world that he had discovered, a universal burst of indignation was heard throughout Spain, and was responded to by the whole of the civilized world. Even the cold heartless monarch quailed before it, and had to express his reprobation of such unworthy treatment. Columbus was ordered to be set free, was received with many marks of favor at court, and the charges against him were never listened to. But the true vindication of his conduct, that which justice strongly demanded, was withheld, notwithstanding repeated solicitations. He was not restored to his

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viceroyalty; and Ferdinand, while disowning the crime, retained its fruits. Many voyages to, and discoveries in, the New World, had recently taken place, not only among his own subjects, but by other nations. Sebastian Cabot, in 1497, had coasted along North America from Labrador to Florida, in an English ship fitted out by Henry VII.; and Cabral, a Portuguese, in a voyage to India, had discovered, in April, 1500, the coast of Brazil. Ferdinand thus saw his new dominions expanding to a boundless extent, and in danger of being encroached on by other nations. He had long repented of the powers granted to Columbus, and every new discovery made him repine the more at the reward conferred on a foreigner, whose services could now be dispensed with. Ovando was appointed to supersede Bobadilla in the government, for which the latter had shown himself wholly incapable. For this, various excuses were assigned to Columbus, and a promise given him of being restored to his office in two years, when all angry passions were allayed and affairs restored to order. Ovando was fitted out with great splendor, and his departure hastened by the reports of the evil results of the administration of Bobadilla. This person had parcelled out the natives among the white men, who, well aware that the time of license would be but short, exercised the most capricious tyranny, and compelled them to work in the mines by the most inhuman cruelties. Ovando left Spain in February, 1502, with a fleet of thirty sail, containing about twenty-five hundred persons. In a storm which it encountered, one ship, with one hundred and twenty passengers, was lost, and the rumor that the whole fleet had perished, spread consternation throughout Spain, but afterward proved unfounded.

While these events were taking place, Columbus remained with the court at Granada, endeavoring to restore his affairs, and at the same time to excite the sovereigns to undertake an expedition to recover the holy sepulchre from the infidels. This seems to have been the leading object in his mind to which all his great discoveries were only preparatory, but probably receiving no encouragement, he turned again to the old path. He therefore requested permission to fit out a new expedition, the object of which was to search for some channel between the countries already discovered, leading directly to the rich realms of eastern Asia. The king gladly granted his request, as putting off for a time more troublesome claims, and as likely to gratify his own cupidity. Before setting out, Columbus wrote to the pope, excusing his delay in visiting his holiness to give a personal account of his discoveries, and explaining the causes that pre-

vented his expedition to the holy sepulchre. He also transmitted two copies of all the letters and grants he had received from the sovereigns, with an account of his discoveries, and a vindication of his rights, to a friend in Genoa, showing his well-founded fear of Spanish ingratitude, and his desire to secure his own dear-bought fame. Having arranged these matters, he left Cadiz in May, 1502, on his fourth and last voyage, accompanied by his son Fernando and his brother Bartholomew. He had four small vessels, the largest only seventy tons burden. After touching on the coast of Morocco and at the canaries, he reached the Caribbee islands in the middle of June. From this he steered by Santa Cruz and Porto Rico for San Domingo, where he wished to exchange one of his vessels which sailed extremely ill. This course was contrary both to his own plan and the orders of the king, by which he had been forbidden to touch on Hispaniola. Columbus anchored off the town on the 29th of June, and asked permission of Ovando to enter the harbor, stating the purpose for which he had come, and his dread of an approaching storm. Ovando had now been some time in office, and his fleet was about to return, having on board Bobadilla, Guarionex, once cacique of the fertile Vega, and an immense quantity of gold collected by the oppression of the natives. One piece of gold, the *grano de oro*, as it is called in the old chronicles, was particularly famous, weighing, according to the best computation, about forty pounds troy English. Ovando refused to allow Columbus to enter the harbor, and neglected his repeated warning to delay the sailing of the fleet. It left the harbor, but in two days was overtaken by an awful hurricane: the ship containing Bobadilla, Roldan, and some others of the most inveterate enemies of Columbus, with all their ill-gotten wealth, was swallowed up in the ocean, and only one vessel, the weakest of the fleet, and containing some property of Columbus, could continue her voyage to Spain. The admiral had sailed along the coast, expecting the storm to be from the land, and, sheltered by it, reached Port Hermoso without much damage. Columbus regarded his own safety almost as miraculous, while the destruction of his enemies was ascribed to Divine interposition by his contemporaries.

Columbus, after refitting his vessel, sailed for the mainland, which he reached on the coast of Honduras. Here he met with a large canoe, containing a cacique and family, who seemed to have come from a long journey, bringing with them articles of copper and manufactures of a superior kind to any yet seen among the natives. The Indians pointed out to him a rich country in the west, proba-

bly Yucatan or Mexico, but Columbus turned east, looking for the supposed strait. He made but slow progress, being opposed by the winds and currents, and a tempest which he says surpassed in violence and duration any he had ever seen. At last they doubled a cape, which he named Gracias a Dios, as the coast turning direct south gave them a free navigation and favorable wind. They stopped at a river to take in wood and water, but the sudden swell of the sea in the estuary swamped one of the boats, whose whole crew perished. Leaving this melancholy place, Columbus next anchored near an Indian village named Cariari, where he was kindly entertained, and remained some time to refresh his men. He next sailed along the region afterward named Costa Rica or the Rich Coast, from the mines of the precious metals found in its mountains, and in his traffic with the natives procured, for the merest trifles, several large plates of gold which they wore as ornaments. Many reports of countries in the west, rich in gold and silver, were communicated to him, and probably had reference to Mexico or Peru; but instead of following these, he continued east, looking for the imaginary strait that was to open up a passage to the east. He next touched at a harbor named Puerto Bello, from its beauty, and afterward was forced to take shelter in a small port, so deep that there was no anchorage till the ships almost touched the land. The sailors used to leap on shore during the night, and so provoked the Indians by their bad conduct that they assembled in great numbers to attack the ships, but were dispersed on the first discharge of artillery. Here Columbus, despairing of finding any passage through the mainland, turned back to explore the rich country he had left behind.

The wind, which had opposed their eastward progress for three months, now suddenly changed to the west, and they were driven out to sea by a tremendous storm, which continued for nine days. The sea boiled like a caldron, and at night its waves resembled great surges of flame; the thunder and lightning were almost incessant, and the rain poured down in torrents into their open vessels. One day a waterspout passed close by the ships, but without injuring them, and after great difficulties they at last reached the river Belen, on the coast of Veragua. Here he remained some time, till his brother, the Adelantado, investigated the country and found it very rich in gold. Columbus again imagined he had found one of those places whence Solomon had procured his unbounded wealth, and resolved to found a new colony. Eighty men were to remain with the Adelantado, while Columbus returned to Spain for supplies.

Their various arrangements were soon completed, but the river, lately swollen by rains in the mountains, was now so shallow that his vessels could not pass over the bar at its mouth, and he was detained till another inundation should set them free. Meantime, Quibian, the cacique of the Indians, resolved to expel the unwelcome guests, and collected his warriors. Diego Mendez, notary to the fleet, suspected their designs, and, venturing boldly into their camp, had his suspicions confirmed. A native, too, revealed the plot of his countrymen to the admiral. They intended to attack the fort by night, set it on fire, and kill all the white men. The Adelantado resolved to anticipate them, and marching into their camp with seventy-five men, seized Quibian, and sent him away captive in a boat, but the wily savage contrived to free himself from his bonds, plunged into the sea, and escaped. Returning to his dwelling, he found it wasted and his family carried into captivity. The admiral had now put out to sea, and was only waiting for a fair wind. Before he could sail, however, the Indians had attacked the fort, and though repulsed, had again assembled in great numbers, massacred a boat's crew, which had been sent on shore for wood, and shut the Spaniards up within their defenses. The admiral was in great anxiety for his brother, the high surf preventing any communication with the shore, when during the night he heard a mysterious voice reproaching him with his want of faith in God, who had given him the keys to unlock the gates of the ocean sea, shut by such mighty chains. Immediately after this vision the sea became calm, and the Adelantado, with his followers, embarked on board the vessels, leaving the settlement deserted. The family of the cacique confined in the ships had partly escaped and partly destroyed themselves in despair at leaving their native land.

Columbus now sailed for Hispaniola, but the winds and currents carried him far west of his appointed port. One of the caravels had been left in the river Belen, another was so wasted that it had to be deserted on the voyage, and the two that remained were so honeycombed by the teredo as to be scarcely seaworthy. Columbus tried to beat up to Hispaniola, but all his efforts were in vain, and at last, fearing his vessels might founder at sea, he had to run them aground on the coast of Jamaica, where they soon filled with water. He then built thatched cabins on the prow and stern for the crews, and remained castled in the sea. His trusty follower, Diego Mendez, went on shore and arranged with the Indians to supply them with provisions, and then offered to proceed to Hispaniola in an Indian canoe to ask relief. With him Co-

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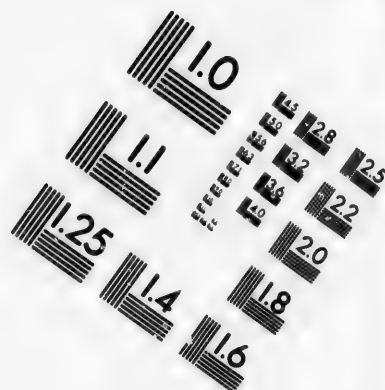
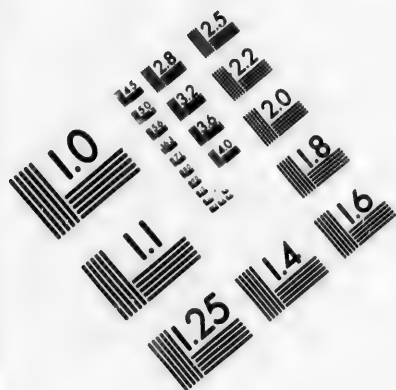
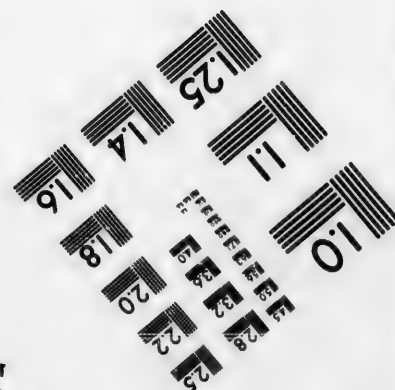
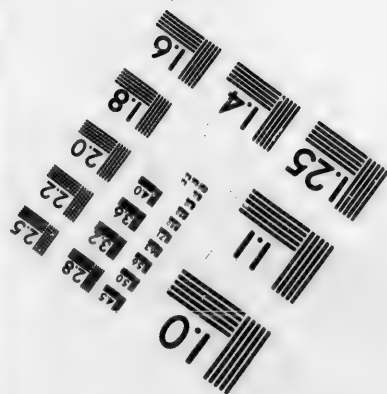
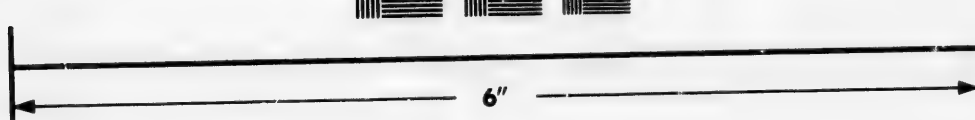
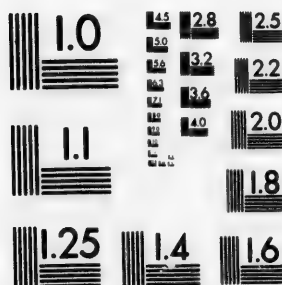


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Columbus sent letters to the sovereigns, giving a most glowing description of the land now discovered, and indulging in romantic visions contrasting strangely with his actual condition — "broken down by age and infirmities, racked with pain, confined to his bed, and shut up in a wreck on the coast of a remote and savage island." Mendez set out on his expedition, accompanied by one Spaniard and six Indians. He reached the end of the island, but was taken prisoner by some hostile Indians who determined to kill them. He contrived to escape in his canoe, and returned to the ships, where he offered to make a second attempt. He was now accompanied in another canoe by a Genoese named Fiesco, while the Adelantado guarded them along the coast. Taking advantage of a calm day, the canoes set sail and soon lost sight of land, but on the second day the water was almost exhausted, and one of the Indians died under the heat and labor. In the evening even the leaders had begun to despair, when the rising moon showed them the island of Navassa, a mere barren rock, but containing water in the hollow clefts. They remained here a day, living on shell-fish, and on the fourth day reached Hispaniola, distant about a hundred miles from Jamaica. Mendez proceeded along the coast for San Domingo, but hearing that the governor was in Haraagua, he left his canoe and proceeded overland to meet him. Ovando promised to send immediate relief, but delayed from day to day and month to month.

A new misfortune had in the meantime fallen on Columbus. Part of the crew, led by a person of the name of Porras, rose in mutiny, and seizing some canoes that Columbus had bought from the natives, deserted him and the sick, and resolved to sail for Hispaniola. They took what arms and provisions they chose, and proceeded along the coast plundering and abusing the Indians. They made two attempts to leave the island, but were driven back by the wind, and then wandered about the country, supporting themselves by robbing the natives. Columbus, by skilful arrangements, had recruited the health and spirits of those who remained with him, but the Indians began to relax in supplying him with provisions, and as the toys given in payment became more common, asked a far higher price for what they brought. In this extremity Columbus, knowing that on a particular night an eclipse of the moon would take place, resolved to use it to intimidate the natives. He assembled all the caciques, and told them that the God of the heavens, whom he and his people worshipped, was angry with the Indians for refusing them supplies, and meant to punish them with famine and pestilence. As a token of this they would that night

see the moon become dark and change its color. Some of the Indians derided the prediction, but when they saw the dark shadow stealing over the moon, they were seized with terror, and hurried to the ships with provisions, entreating Columbus to intercede to avert the threatened calamity. Columbus retired to his cabin to commune with the Deity, while the Indians filled the woods with their wild lamentations; and when the eclipse was about to diminish, Columbus came forth and told that he had prevailed with God in their behalf, and that they would be pardoned on condition of fulfilling their promises, in sign of which the darkness would now withdraw from the moon. Columbus was thenceforth regarded by the Indians with awe, as possessed of supernatural powers, and from that time no want of provisions was felt in the ships.

Eight months had now passed away, with no prospect of relief, and a new mutiny was about to break out, when one evening a vessel was seen off the harbor. Next day a boat came from it to the ships, in which was Escobar, one of the former rebels against Columbus. He had been sent by Ovando, probably as a spy, for, after a short conversation with Columbus, and giving him a letter from the governor, he departed. The crew were much disappointed at this desertion, but were reassured by the admiral, who said that Escobar's vessel was too small to take the whole, and that he had sailed for larger ships. Columbus afterward sent a messenger to the mutineers, offering them a free pardon and passage home, provided they would return to their obedience. Porras rejected all conditions, and to render his men hopeless of forgiveness, resolved to attack and plunder the ships. Columbus sent his brother to meet them, who again offered them pardon, but, confident in their numbers, the rebels would listen to no terms, and attacked the Adelantado. They were well received by this experienced soldier, who took Porras captive with his own hand, when his followers fled, leaving several slain. Next day the fugitives sent a petition for pardon binding themselves to obedience by horrid imprecations. Columbus granted this request, and at length, after a year of delay, two vessels arrived, one fitted out by Mendez at the admiral's expense, the other by Ovando, whose long neglect had roused the public indignation so that even the clergy were condemning it from the pulpit. On the 28th of June, 1504, Columbus took leave of the wreck which had been so long his home, amid the tears of the Indians, who regretted the departure of their celestial visitants. On the 13th of August he anchored at San Domingo, where he was received with the highest marks of distinction by the people, in

which the governor saw fit to agree. There was, however, no friendly feelings between them, and Columbus found reason to complain of the way in which the island, where he had so strong an interest had been governed.

The condition to which Hispaniola had been reduced during the absence of Columbus, is the best refutation of the calumnies of his enemies. Ovando had been accompanied to the island by a large band of adventurers, who on their arrival set out for the mines, but, unaccustomed to labor, and ignorant of the method of collecting the precious metals, soon exhausted their store of provisions without any result, and returned in utter poverty to the town, where more than a thousand of them died of want and disease. Isabella had ordered the Indians to be set free, when they, of course, refused to labor in the mines. A new decree was then obtained, by which they were to work a short time for hire, and in order to aid in their conversion. On this pretence they were anew portioned out among their former masters, who treated them with the most brutal cruelty. Las Casas, an eyewitness, says: "They were compelled to labor by the lash, fed on unsubstantial cassava bread, and so sparingly that they scrambled like dogs under the table for the bones thrown to them by their masters; and when at last dismissed, they were found dead on the road home, or lying gasping under the trees, faintly crying 'Hunger, hunger!'" Many fled to the mountains, others killed themselves in despair, and before twelve years from its first discovery was over, several hundred thousands of its once happy natives had been sacrificed to the lust and avarice of the white men. A more striking fate was reserved for the people of Xaragua, still independent, and governed by Anaconda, the wife of Caonabo, formerly mentioned. Ovando marched thither with three hundred men, and was received in the most friendly manner by the natives. On a Sunday afternoon he assembled the chiefs and people to witness a mock fight among his soldiers, but at an appointed signal took all the caciques who had met in his lodgings, to the number of eighty, prisoners, forced from them by torture a confession of guilt, and then consumed them in the flames of the house. His troops, meanwhile, massacred the naked and defenceless Indians, shut up in a square whence they could not escape. The excuse for this treachery was an alleged conspiracy of the natives, for which Anaconda was subsequently hanged, and the fertile country reduced to a desolate wilderness. Another province, Higüey, was still independent, but the Spaniards soon penetrated there also, and after an obstinate

but unavailing resistance, massacred or subdued the people, and taking the cacique prisoner, hanged him like a common felon. In this war the Spaniards committed deeds of horrid and atrocious cruelty, such as can not now even be related, so that their countryman, Las Casas, says: "All these things, and others revolting to human nature, my own eyes beheld, and now I almost fear to repeat them, scarce believing myself, or whether I have not dreamed them."

Such was the state of the once rich and happy island, when Columbus returned to it after his long absence, more like a region given as a prey to evil spirits, than the earthly paradise he originally imagined it. He left it for Spain, on the 12th of September, 1504, after assisting from his private funds many of the companions of his misfortunes, some of whom had been the most violent among the rebels. His vessel suffered much from tempests, and he himself was confined to bed by the gout, but arrived in Spain on the 7th of November, and took up his residence at Seville. Trouble followed him even here, the revenue he should have received from the Indies being withheld by the governor, and his remonstrances to the king unheeded. The calumnies of his enemies prevailed against him, though he had, in his own words, "served their majesties with as much zeal and diligence as if it had been to gain Paradise." His best friend was now gone, Isabella having died on the 26th November, of deep melancholy caused by the death of her favorite children. Columbus remained in Seville during the winter, his health not permitting him to proceed to court, where the king received all his applications for justice with cold indifference. In May he was able to travel to Segovia, where he had an interview with Ferdinand, who received him with cold professions of kindness and evasive promises. The king never meant to keep his word—"a little more delay, a little more disappointment, a little more infliction of ingratitude, and this loyal and generous heart would cease to beat; he should then be delivered from the just claims of a well-tried servant, who, in ceasing to be useful, was considered by him to have become importunate."

And this event was now at hand. Tortured by disease, and despairing of justice, Columbus having made a will settling all his affairs with scrupulous exactness, and performed the pious offices required by his religion, expired with great resignation, on the 20th of May, 1506, in about the seventieth year of his age. His remains were first deposited in the convent of St. Francisco, whence they were transferred in 1513 to a monastery at Seville, and in 1536, along with the body of

his son Diego, were transported to Hispaniola, and interred in the cathedral of San Domingo. Even there they were not destined to rest in peace, but in 1795, when the island was given up to France, were removed to Havana, in Cuba. Ferdinand erected a monument to his memory, or rather of his own ingratitude, inscribed thus: "For Castile and Leon, Columbus found a New World." The true monument of the great Genoese is the vast continent he made known to mankind—his true reward, the gratitude of posterity, and the fame that will attend him to the latest ages. His actions show his character in its truest and noblest light, especially when contrasted with those of his contemporaries, with whom he came into immediate contact. His imagination was ardent, and apt to lead him astray, but regulated by a knowledge of science rare in those days. His ambition was lofty and soaring, and thus the source of much misfortune to him. He was not satisfied with common rewards, but sought others which the haughty dignity of the Spanish monarch felt degraded by granting, and the very importance of his services became a reason for withholding from him his due reward. Avarice seems to have influenced his mind less than honor and dignity, and he was always more disposed to maintain his authority by mildness than severity. His conduct to the poor Indians is the darkest spot on his character, and when we read of the misery and destruction his discovery entailed on that unoffending race, we almost feel as if his own sufferings were demanded by justice. Though he often tried to defend the natives from the oppressions of his followers, we can not forget that it was his constant appeals to the low avarice of the Spanish court, and the visions of gold and precious stones, by which he endeavored to prove the value of his discoveries, that drew to the New World that horde of lawless ruffians who were the great cause of all his trials. He led out colonies by the hope of gold, wrested from the hands of weak and defenceless savages, and his reckless followers, balking of their prey, turned on him as a deceiver. This curse of the greed of gold, has adhered to the Spanish colonies even to the present day, like a malignant pestilence, wasting their strength and never suffering them to take root in the land. It is but justice to this great man to remark, that many of his errors were those of his time, and that even the church justified his treatment of the natives. His briefest imaginings also fell short of the wonderful reality. "How would his magnanimous spirit have been consoled," says his eloquent historian, "amid the afflictions of age, and the cares of penury, the neglect of a fickle

public, and the injustice of an ungrateful king, could he have anticipated the splendid empires which were to spread over the beautiful world he had discovered; and the nations, tongues, and languages, which were to fill its lands with his renown, and to revere and bless his name to the latest posterity."

It may not be uninteresting to mention the subsequent fortunes of the family of Columbus. He was succeeded in his rights as viceroy of the New World by his son Diego, described as a man of great integrity, of respectable talents, and of a frank, and gentle disposition. He came forward to claim the restitution of the family offices and privileges; but Ferdinand was not inclined to bestow on the son what he had withheld from the higher merit of the father. After two years' vain solicitation, Diego only obtained leave to prosecute his claim in the ordinary courts of law. The suit, commenced in 1508 and continued for several years, was decided in his favor, but the court had no power to enforce compliance on the monarch. At last, Diego having married a niece of the celebrated duke of Alba, the chief favorite of the king, the monarch yielded to this powerful influence what he had denied to justice. Ovando was recalled in compliance with a promise long before made to the queen on her deathbed; and Diego appointed with the same powers. He went out to San Domingo in 1509, with his wife, his two uncles, and his brother, and ruled with a degree of splendor hitherto unknown. But he could not reform the abuses that had crept into the colony; factious men still disputed his authority, and the oppression and destruction of the Indians continued. In 1519, Cuba was colonized, and the mines in Hispaniola being exhausted, the culture of the sugar-cane, a more certain source of riches was introduced. On the representation of the Dominican friars, the labor of the natives was diminished, and negro-slaves from Africa employed instead, but treated with a barbarity surpassing even that inflicted on the Indians. In 1515, Diego repaired to court to answer charges brought against him; but though his innocence was admitted, he continued involved in long and troublesome litigation with the fiscal officers of the crown. He returned to the island in 1520, but was recalled about three years afterward, and spent the rest of his life in the vain endeavor to obtain justice from the court, having died near Toledo in 1526. His wife claimed the inheritance for his son, Don Luis, who, finding his dignities and privileges sources of vexation to himself, resigned them to the emperor Charles V., and in return was created duke of Veragua, and received a fixed sum of money for his claim to a tenth of the prod-

uce of the Indies. In 1578, all the legitimate male heirs of Columbus were extinct, and a long lawsuit commenced, which was at last decided in favor of Don Nuno de Portugal, a branch of the Portuguese house of Braganza, and the great-grandson of Diego, the eldest son of Columbus.

Columbus's brother, the Adelantado, survived him several years, but was never employed in any office of importance, the king being jealous of the too great influence of the family. Fernando, the second son of Columbus, made several voyages to the New World, and also travelled over many parts of Europe, Asia, and Africa. He possessed good natural abilities and studious habits, and collected a library of more than twenty thousand volumes, which he left to the cathedral of Seville, where he died in 1539, aged about fifty-one years. He wrote several works, the only one of which that is known being his history of his father the admiral. It is singular that this history only exists in Spanish, a re-translation from an Italian translation of the original. This has given rise to many errors in names and dates, but the work is still entitled to great credit, and forms the foundation of all the biographies of Columbus; one of the best and fullest of which is the production of Washington Irving. It is to this work that we have been chiefly indebted in drawing up this account of the fortunes of the illustrious Genoese, whose merits have survived all calumny, and are indelibly inscribed on the history of the world.

EXERCISE FOR THE EYES.

BY DR. W. A. ALCOTT.

It has been very generally supposed, that in order to strengthen the eye, above all, if debilitated or diseased, it must be little used. From this mistaken view have arisen a thousand errors. To it in no small degree, we owe the mighty deluge of spectacles of all sorts, of which we have already loudly complained; together with a host of mechanical contrivances for favoring weak eyes; or improving those already strong. To it, moreover, we owe in no small degree, much of that superficiality in learning which is so common among us now-a-days. Many a student seems to regard spectacles as a sort of substitute for thought and solid knowledge.

Now we are of those who believe that if no person in the world would use any sort of spectacles or glasses for a thousand years to

come, the eyesight of the race then on earth would be far better than it is likely to be, as things are now going on. This is not saying that spectacles may not in some instances, be advantageously used, but only at the extreme to which we have alluded, would be far more tolerable than that which now exists. Nine in ten, perhaps ninety-nine in a hundred who use glasses are injured by them most unquestionably.

The grand point after all in the work of improving the eye—just as it is in the work of improving any other organ—is to give it a proper amount of healthful exercise. In one word, it must be used.

Exercise of the eye, to be useful, must be varied. We must not read always, nor always refrain from reading. We must not always read the coarsest print nor must we go to the other and worse extreme, that of always using small print. We must not use a strong light always; nor must we resolve not to use a strong light at all. We must not read too much by artificial lights, nor need we refuse to use a lamp or candle in any circumstance. We should not read much when the mind or the body is in a state of considerable fatigue; nor need we go to the other extreme, of never reading at all in such circumstances.

The course which science, experience, and observation, would seem to point out, is the following. Keep the eyes cool.—Use them much, generally in a full strong light, and in the open air; but at any rate, use them. Accustom them on occasions, to almost every degree of light, every kind of artificial arrangement: taking care, however, especially in reading small or bad type, and in using a light badly constructed or in a bad position, not to go so far as to induce fatigue. We believe that with these latter cautions, the eye will always improve by use; and that, on the contrary, more it is favored and indulged—babied as it were—the worse will be its condition. We believe that thousands tend or baby their eyes into chronic or deep-seated disease, when constant and varied exercise, and a due attention to light, air, and water, would have rendered them as strong as our own. We have no more use for spectacles now than we had at twenty years of age; nor do we mean to use any for twenty years to come. And yet we read with impunity—for a little while at once—in all sorts of light; and have so for about fifteen years.—And yet according to common appearances no man had a worse prospect before him, so far as eyesight was concerned, fifteen or twenty years ago, than ourselves, and though we could not lay too much stress on the experience of one individual, we must be permitted to believe that it is worth something.



John Winthrop

First Governor of Connecticut.

JOHN WINTHROP, OF CONNECTICUT.

JOHN WINTHROP, FIRST GOVERNOR OF CONNECTICUT.—This distinguished gentleman, for many years the governor of Connecticut, was the eldest son of John Winthrop, the first governor of Massachusetts, and founder of the city of Boston—that famous pattern of piety and justice, as he is called in the early chronicles of New England—who emigrated to America in 1630, and brought with him the confidence and respect of the government he had left, and the most exalted and upright faculty for the duties he came to assume. Graham, adopting the thought of a classic historian, says of him that he not only performed actions worthy to be written, but produced writings worthy to be read. His son John—the subject of this brief memoir—was scarcely less distinguished. He was the heir of all his father's talent, prudence, and

virtues, with a superior share of human learning—much addicted to philosophical study and especially to physical science. He was one of the early patrons of the London Royal Society. Sir Hans Sloane, and three other members of that society, some fifty years afterward, in commending the grandson of this gentleman to the notice of their associates, bear honorable testimony to the good repute in which the ancestor was held. They speak of the learned John Winthrop, as "one of the first members of this society, and who in conjunction with others, did greatly contribute to the obtaining of our charter; to whom the Royal Society in its early days was not only indebted for various ingenious communications, but their museum still contains many testimonies of his generosity, especially of things relating to the natural history of New England."

John Winthrop was elected governor of

Connecticut for several years, in which station his many valuable qualities as a gentleman, a philosopher, and a public ruler, procured him the universal respect of the people under his government; and his unwearied attention to the public business and great understanding in the art of government, were of unspeakable advantage to them.

He was twice married, his second wife being the daughter of the celebrated Hugh Peters. By this marriage he had several children, two of whom were sons. The elder, Fitz-John, followed in the footsteps of his father—was elected governor of Connecticut, and held that post for nine years, commencing in 1698, and continuing till the day of his death. Thus father, son, and grandson, died in the highest office to which the affections of the people could exalt them. The younger son was a member of the Massachusetts council, under the new charter granted by William and Mary, and afterward chief-justice of the superior court of that state. His name was Wait Still, a compound of two family names—the middle name being derived from the intermarriage of Adam, his great-grandfather, with the family of Still.

Wait Still Winthrop, the chief justice, appears to have left but two children, of whom John, the only son, resembled his grandfather in an ardent devotion to science, and like him became a distinguished member of the Royal Society; his introduction to that body being greatly facilitated by the respect in which the memory of his ancestor was yet held. Attracted by the love of his favorite studies, and his attachment to the society of learned men, he removed to England, and died in 1747. He had seven children, of whom two were sons, John Still and Basil. On the 4th of September, 1750, the former married Jane Borland, of Boston, whose daughter Ann married the late DAVID SEARS, Esq.,* of that place.

* Of this gentleman a note will hardly allow us the proper space to speak of his character and virtues. He was born on the 12th of August, 1752. He removed from Chatham to Boston in 1770, and visited England in 1774. He became acquainted with Dr. Franklin in London, and took letters to his friends in France and Holland. He remained on the continent nearly two years, and with difficulty made his way back to Boston. In various modes his services were useful to his country. During the presidency of the elder Adams, he was one of a committee of the citizens of Boston, for building a frigate (the Boston), toward which he subscribed three thousand dollars, and presenting it to government. He was largely interested in the India and China trade, and added much to his fortune. He was distinguished as an intelligent and able financier—a director in the first "bank of the United States," from its commencement to its termination—often a referee in intricate cases of mercantile equity; and his whole career was marked by the most incorruptible integrity, which never for the sake of a paltry advan-

The name of WINTHROP will be remembered as long as nations exist. It will rank with Newton, Boyle, and Locke, and those philanthropists of every age, who are an ornament to human nature, and whose lives have been devoted to the cultivation of the moral graces, and the advancement of social and religious happiness; enlarging the circle of the human mind, and adorning the principles of philosophy with the precepts of piety. Their fame is identified with the progress of knowledge and the diffusion of virtue. The history of such men sheds a bright and undying lustre upon their country, and will call forth the grateful recollections of unborn generations, so long as truth shall triumph over error, and the influence of Christianity be felt in removing vice and superstition from the hearts of men.

INDEPENDENCE AND ACCUMULATION.

THERE is a remarkable harmony between the moral and physical laws of the universe. The laws of the unwritten revelation of nature may be said to give their sanction to the laws of the written revelation of the Bible. They never clash, they always run parallel; indicating a common source, and pointing to a common issue. We might find a familiar illustration of this great truth in the moral precept of temperance. We shall find the laws of health and organization co-operating with the laws of our spiritual being, to bless the man who obeys this moral law—to punish him who disobeys it. We shall find the temperate man, other things being equal, in the enjoyment of vigorous health; we shall find the

tage violated that punctilious delicacy which is indispensable to the character of a gentleman.

"An easy mien, engaging in address,
Looks which at once each winning grace express,
A life where love and truth were ever joined,
A nature ever good and ever kind,
A wisdom solid and a judgment clear,
The smile indulgent, and a soul sincere."

Mr. Sears was the proprietor of a large estate in Waldo county, in Maine, the settlers and tenantry of which honored and revered him, and as they became proprietors of the soil, testified their gratitude for his patriarchal treatment, by naming their towns in his honor. He was generous and charitable—the founder of the widows' fund in Trinity church—and a contributor to numerous charities. He died in front of his house in Beacon-street, struck instantly dead by a stroke of apoplexy, as he was getting into his carriage to make an afternoon visit, on the 19th of October, 1816. "By this affecting event, this town [Boston], has lost an eminent merchant and excellent citizen; an only child, an affectionate parent; this church [Trinity], a distinguished benefactor; society at large, a well-bred and hospitable gentleman."

intemperate man old in middle life, the victim of low spirits, headache, gout, dyspepsia, and delirium tremens. We might find an illustration equally striking in the moral precept of chastity. Terrible are the sanctions with which the physical laws of health, and organization have hedged round this divine statute. The violation of it is indeed followed by rottenness in the bones.

Our purpose in this article is to endeavor to show that this harmony between moral and physical law, prevails most strikingly as regards the vice against which the tenth commandment is directed. Many and solemn are the denunciations of the spirit of covetousness. We are told that the love of money is the root of all evil: that we can not serve God and mammon; that a rich man can not enter into the kingdom of heaven. We are taught that a man's life consisteth not in the abundance of the things which he possesseth; and commanded to take no thought for the morrow. How does external nature respond to these doctrines and precepts? Most emphatically and unequivocally. It sanctions the precept, "Take no thought for the morrow," by declaring, that by taking ever so much thought we can not be rich. While we sigh for independence, and pursue it with our whole heart, nature declares that we can not be independent. While we accumulate, adding house to house, and field to field, nature declares that there shall be no accumulation of real riches in all her wide domain.

Palpable facts seem to contradict these assertions. Men do become rich, accumulate property, and attain to that sort of independence which enables them to dispense with the necessity of earning bread by the sweat of their brow. These are but exceptions to the great general rule. The millions of the human family are poor; they have always been poor; they shall always be poor. All the riches in the world were no more to the poverty than a drop of rain to the sand of the desert. All the accumulated property in the world would not sustain all the men in the world in independent idleness for one month; and it is written in the law of the seasons that it shall never be otherwise.

The principal riches in the world, and that without which all other riches were worthless, is grain, which is emphatically termed the staff of life. But the primeval curse is upon the earth, and it does not bring forth double harvests. We are told that seedtime and harvest shall never cease; and in this it would appear to be intimated, that the annual harvest of the world shall suffice only for the world's annual rations. At all events, thus it is: nature declares that there shall be no accumulation of grain; but that

yearly as the seasons revolve we must sow our fields and reap our harvests. It is not at all probable that there was ever a year and a half's supply of the first necessary of life at one time in the world. Two thousand years ago a Roman poet thus wrote:—

"The sire of gods and men, with hard decrees,
Forbids our plenty to be bought with ease,
And wills that mortal men, inured to toil,
Shall exercise with pains the grudging soil."

It is still the same in these days; though the science of agriculture is probably better understood and more successfully reduced to practice now than at any former period.

Clothes, which come second in our list of necessities, are subject to the law which regulates and limits the supply of food. An erroneous opinion prevails, that by means of our mechanical power and machinery, we can produce clothing stuffs in unlimited quantity, and with as much facility as bank-notes. It were as correct to suppose that millers can produce an unlimited quantity of flour, or that bakers can produce loaves in unlimited numbers; whereas it is clear that the loaves must be limited by the quantity of flour, and the flour by the quantity of wheat in the world. It is the same with the raw material of our clothing. The sheep's wool, the cotton wool, the flax, the raw silk, which are the materials of our principal textile manufactures, are as difficult to produce as grain. They are equally subject to the law of the seasons; and there is as great a difficulty in the way of their rapid increase. Indeed, there are peculiar difficulties in the way of an increase of our clothing materials. Grain can be grown in many countries where cotton and silk can not; and it will be seen at a glance that there are peculiar difficulties in the way of a rapid increase of the quantity of sheep's wool.

So as regards food and clothing, the indispensable necessities of life, a nation can never be said to be rich or independent. It can never say with the fool in the parable, "Thou hast much goods laid up for many years." But yet there are truth and meaning in such expressions as "the wealth of nations," "the increase of national wealth." In a most important sense, nations may be rich, either as compared with each other, or with themselves at different periods of their history.

The elementary idea of the wealth of a nation is exceedingly simple. It consists in the facilities it possesses for performing that work which must be performed every year. More particularly, it consists in the number and completeness of its tools, and in its skill to use them. Moral law commands, "Lay not up treasures on earth;" and the physical law of the seasons effectually prohibits

ACCUMULATION.

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nations from breaking it, as regards their indispensable riches; but neither moral nor physical law interposes to prevent nations or individuals from performing their work with as much facility and quickness as they please. Accordingly, men have sought out many inventions, in which we find the secret of their riches. The fertile lands of a country, its agricultural implements, its roads and canals, its quays and harbors, its ships, its factories and machinery—these, and the skill to use them, are the elements of a nation's wealth. They are tools and instruments for the production and distribution of its annual supply of food and raiment; and according to their number and perfection, and the skill to handle them, is a nation rich or poor. But all these things are rather the potential means of wealth, than wealth itself. A nation may be possessed of all these means and appliances of wealth, and yet be poor as regards that indispensable wealth of nations, food and clothing. If it were possible to multiply all these things a hundredfold, still the nation that possessed them might be only a little way nearer to independence than the most untutored tribe of savages.

But still there is a noble liberality in the hand of nature. Although the terms on which nations hold their lease of life are unremitting toil and labor from year to year, yet provision is made for the support of two large classes who, from different causes, are incapable of toil. We allude to the young and the old—the wards and the pensioners of society. Nature makes ample provision for these two classes. While she sternly demands that her strong young men shall follow her as she walks majestically through the seasons, and live by submitting to the primeval destiny, she pours from her lap an abundant supply, not only for her immediate followers, but for their old men and their little ones. Here we have the first glimpse of a retiring pension fund in the economy of nature. We shall now briefly trace the process by which men write their names upon the list of pensioners, and become independent, long before nature gives them their discharge from the ranks of labor.

The social compact is a fable; but it is founded upon enough of reality to warrant us to reason upon its prescriptive laws. One of the most universally acknowledged of them has reference to the institution of property. Men generally submit to labor as to a necessary evil, and long to escape from it to the imaginary elysium of independence. Such an escape is possible only by mutual accommodation. In a simple state of society men could not be rich. They would soon reach the limits of that accumulation which the

physical laws of the world permit. They might produce in one year as much grain, and weave as much cloth, as would feed and clothe them, say for seven years; but their independence of labor would still extend over only six years; and before the end of that time, the rats and the moths, and the wearing elements, would have made inroads upon their stores. But the independence which man can not win single-handed from nature, he secures by a compact with his brethren. The general process is as follows: He labors hard, and produces more than is required by his immediate wants. He gives the surplus to society, and receives in return a bond for the amount upon its productive powers. All that he produces, whether of corn, cloth, or other less-necessary commodities of daily use, as well as the aggregate produce of the entire community, is consumed during the year; but, at the end of it, the hard-working man holds a mortgage upon part of the next year's produce, even before it exists. He repeats the process. He goes on working hard, or working skilfully, or persuading others to work for him, disposing of his surplus produce, and increasing the number or amount of his bonds upon society, by which we simply mean money. At length he is satisfied that his acknowledged claims upon society are sufficient to keep him independent of labor all his life, and then he retires upon a competence.

An independence thus won does no violence to that natural law which forbids the independence of an entire community. It is won by an honest and honorable process; and the subject of it can comfort himself with the reflection, that he is only receiving back from society that with which he had intrusted it, or for which he had given it value. While he was bearing the heat and burden of the day, others who had borne it before him, as well as the little ones who were to bear it after him, were living upon the fruit of his immediate labor. All parties were accommodated. They

"Held their being on the terms,
Each help the others."

One would fain hope, that the time will come when this much-coveted prize of independence will be held out by society as within the reach of all its members; when the honest, industrious man, instead of being haunted all his life by the fear of poverty in his old age, shall have the consolation of knowing, that after a certain period of labor he shall receive his discharge, and be admitted in virtue of his services, into the great hospital of society.

This were a consummation devoutly to be wished; but after all, how precarious is the independence of the most independent! As

permit. They much grain, and would feed and years; but their still extend over the end of that and the wearing e inroads upon pendence which ed from nature, th his brethren. ews: He labors n is required by gives the surplus return a bond for ve powers. All of corn, cloth, or ties of daily use, uce of the entire ng the year; but, rking man holds next year's prod- He repeats the ng hard, or work- others to work for a produce, and in- out of his bonds imply mean mon- fied that his ac- tiety are sufficient labor all his life, competence. n does no violence forbids the inde- munity. It is won process; and the itself with the re- ceiving back from had intrusted it, it value. While and burden of the it before him, as were to bear it af- the fruit of his im- were accommoda-

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we approach the weeks of harvest, we are within a month or two of absolute starvation. Were the winds commissioned to thrash our fields, or the milfew to blight them, or the caterpillar to devour them, the rich and the poor, the nobleman and the beggar, should alike be swept into a common ruin. All the other riches in the world, failing the riches of our golden harvest-fields, were as worthless as the flash-notes of the forger. But, as regards this indispensable treasure, we have seen that neither individuals nor nations have been or ever can be rich. Our "daily bread" is measured out to us, and our daily bread only. By taking thought, we could as easily add a cubit to our stature, or wash the Ethiopian white, as we could make the nations independent of labor for a single year. And yet, this independence is one of our heroic words. We sing songs in its praise. An important section of our social institutions, insurance societies, in all their varieties, is founded upon our desire of it, and may be regarded as so many breakwaters thrown up against the dreaded waves of uncertainty, in the midst of which we are destined to lead our lives. After long years of incessant toil; after the limbs have been stiffened with labor, or the brain wasted with thought, or the heart shrivelled with feverish longing, one in a thousand attains to an independence which is built upon the world's riches. Society is pledged to find him in food and raiment, though thousands should be in want of both. But society can discharge its obligations to him only if the seasons are favorable; or, if it does so in unfavorable seasons, it is at the expense of hunger and nakedness to many of its members. For, we repeat it, the world, as a whole, is poor; there is no accumulation of real wealth in the richest nation. Poverty is the constant companion of the millions of the human family. Starvation is often within a day's march of countless multitudes of them; once a year is within a month of them all. But God tempers the wind to the shorn lamb; and the providence which gives to this large family its daily bread, while it presents a sublime fact upon which faith, which is better than independence, can rest in peace, administers a severe reproof to that faithless faintheartedness which is too often the principal motive to the pursuit of the phantom independence.

JUDGMENT.—The most necessary talent in a man of conversation, is a good judgment. He that has this in perfection is master of his companion, without letting him see it; and has the same advantage over men of other qualifications, as one that can see would have over a blind man of ten times his strength.

A RAMBLING ESSAY UPON ROOMS.

We are inclined to think that the romance of life lies upon its outskirts. Society is but human nature seen through a prism, with its rim only fringed with the tints of poetry. In a little seacoast town in Massachusetts, we found more of the pure spirit of romance than we have ever met in the most crowded cities or the most fashionable society. It was a gloomy morning, and a drizzling rain roughened the air, when we set out upon our expedition. But, seated in a high-backed chair, in an old weather-beaten and timeworn room, we defied the day, and plotted the writing of this essay on rooms.

On first entering, we knocked our head against the low rafters, which projected from the ceiling. We forgave the injury in consideration of the compliment to our stature. The occupant of the room, an old withered woman, rose at our entrance, greeted us cordially, and gave us the old-fashioned, high-backed chair for our seat. We had now leisure to look about us, and make an accurate survey of the room. The unplastered, rough walls, and the bold, out-jutting rafters of the ceiling, were imbued with a brown rich color, which the smoke of many years had lent. A small fire was burning on the board hearth, over which swung a simmering kettle, while the taint line of blue smoke curled up the deep black throat of the chimney. The chimney was of no modern date, and constructed on no utilitarian principles. Its breadth and depth were so great, that, without inconvenience from the heat, three or four could sit within its wide arms, and enliven a long winter evening with gossiping tales. Bending forward, we could look out into the sky and see the lazy clouds trailing overhead. The unpainted floor was thinly spread with scattered patches of carpet; and on the faded rug, which covered the hearth, sat an old gray, purring cat. Through the diamonded panes of the narrow windows, the eye looked out upon the leaden gray of the ocean, fringed with white foam, where the surge kept beating upon the ragged line of rocks. An old oaken chest of drawers stood in the corner, crowned with a row of old cups; and the high mantel-piece was covered with bits of china, and dingy broken glass. These, with the rusty bluish-brown coverlet, thrown over the bed in the corner, and strangely harmonizing with the general color of the room, completed its contents. Opposite us sat our aged hostess, with her mob-cap tied snugly under her chin, and sitting in a stuffed high chair, from which to the wall was swung an old green cloak, to protect her back from the cold air which whistled through the chinks

of a closet-door behind her. In a low, tremulous voice, interrupted by asthmatic pauses, she went on crooning to us of the old legends of the place. She told us of dreadful ghosts, and signs, and omens, authenticating them all, and throwing the weight of her own belief into the balance—of dead men, lost at sea, who came, all dripping, up the rigging of other ships, at night—of sailors, who returned, after death, to their widows, while sitting over their lonely fires at midnight, listening to the howling of the storm—until the air grew misty, and a sort of thrill came over us, and we waited to see some supernatural shape rise up before us. Nowhere else than in that old, dim room, could such stories have been told with effect in the noon of the day. But the place was weather-beaten and rusty, the light was deprived of its cheerfulness by the dingy panes, and the hoarse under-tone of the surge kept up a ghastly accompaniment to her quivering voice. When we left her, the day seemed unnatural and too bright. So we wandered to the shore to hear the breaking surf, and accustom ourselves to the daylight.

We are all pieces of furniture. As the trees across a stream grow toward each other, and interclasp their boughs, grow these natures of ours to that which is next them. The invisible tendrils of affection spread out on every side, and, like the innumerable threads that bound Gulliver to the ground, they fasten us to places, and things, and persons. No one can separate himself from his room. His home is a sacred place, and a sacred feeling. The young spirit seems to have left some traces of itself there. In our room, the spirits of our friends are around us. The old conversations that once moulded the air into music are there still. The consciousness of having been happy in a place, lends a reflection of light to cheer our overshadowed moods. All our thoughts have a dwelling-place in our room. What an old, familiar greeting do the chairs, books, and tables, give! They seem to invite us to them. The sunlight there is appropriated; it is not common sunlight, but the same that slanted through the windows years ago; it comes back every morning laden with the freight of all preceding mornings. All the joys of the summer-days of our youth are in the breeze that stirs through the room, and ruffles the leaves of our books. It seems as if joy was a perfume that time could never efface from the places wherein the spirit exhaled it.

Man is as much a thing as a thinker. We are uneasy at writing in a foreign place. It takes weeks and months ere we can become accustomed to a new room, and then it is but a poor substitute for the old, time-hallowed one. The mind can not break away from the

thralldom of place. The boy who could not spell his word because he had not got the "hang" of the new school-house, was not altogether in the wrong; and the world may have done injustice to the old traveller, who had jumped a great jump in the island of Rhodes, but could do it nowhere else. We seem made up of little sympathies, which take a bias from the most trivial facts and occurrences. The strongest tide of thought is turned aside by a feather. Even thinking seems to be but a constant series of impulses from external facts and incidents, and from recollections and reminiscences. Goethe would have no luxurious furniture in his room, for fear that his thoughts would lose their masculine vigor and force, by receiving an insensible inflection from them. His study is barren of ornament, and studiously simple; so is his style. Some people write their lives by tables, and chairs, and sofas; others with pen, and ink, and thought. We think that we may see the peculiar character of certain of our writers, expressed quite distinctly, by their rooms. The hard, nervous strength of Luther was begotten of that mine in which his youth was spent, and his emergence into day aptly typifies the part he played in after-life. Tennyson's "little room so exquisite," accounts for all the defects in his style. So is Walter Scott's room, with its suits of armor, and claymore, and shield, and antlers, and staghound, and its thousand old curiosities, the happiest illustration of his style and character as a writer—both a curious piece of grotesque patchwork—the bold energy and endurance of the age of chivalry still keeping a place among the refinements and effemacies of modern life. No corner of his mind was destitute of some quaint bit of a story and ballad, and his collection of facts was a perfect "curiosity-shop." The grand background of his room is nature bold and strong, but distant and in perspective. The same is the fact in his writings. Nature is boldly sketched, but its minute traits and workings are lost by distance, and are subordinated to the love of costume and tradition.

By a room, we mean a room *par excellence*, not a general rendezvous of the whole family, but the private room of the individual—the library of the literary man—the studio of the artist—the inmost shrine—the appropriated spot. The parlor is no room at all—it is a compromise of all the tastes of the house. All the arrangements are referred to the standard of fashion, and there is almost no scope for the individual fancy of the owner.

We would always have a room in one of the upper stories, if we lived in the city. In the country, it is not of so much importance. There, one may have vines curling

about the window-sills, and peeping into the room—the green trees waving their broad arms in the air, and the dancing shadows on the green sward beneath you. Then, in the country, and in summer, one can make the whole sky his roof, and, embowered in a “place of nestling green,” almost forget his walled-in room. But in the city, that world of brick and mortar, give us the topmost room. It is a wearisome trudge up over three flights of stairs, but you get your recompense. There is less dust and noise—people are not for ever tramping by your door; it is too high to make it a convenient lounging-place for idlers; and if friendship is not a sufficient inducement to your friends, they are not worth regretting. You see the diminished people walking noiselessly through the streets, as in a panorama. If you have a lower room, your sunset is the light shining from the opposite wall of brick. Having become thoroughly tired of this, we have a room in the fourth story. We can sit now above the city, and be “alone with the night.” Beneath us gleam the lamps in the sleeping chambers; all around us a thousand hearts are beating, and a thousand heads rest upon their pillows; the mighty shadow of sleep is upon the city; the silent moonlight glances upon the vases and the skylights, and freckles the distant, slowly-gliding river; the noise of revelry comes dim and faint from the streets; now and then, some one goes whistling by, and the sharp ring of his heel upon the pavement echoes through the deserted courts. In the daytime, a thousand roofs send up their thin, curling lines of smoke, that, mingling, hang a cloudy veil over the city. Overlooking the tops of the houses, we can see the rim of the ocean; countless ships, with lithe spars and fluttering streamers, lie sleeping at their posts; vessels, with their sails widespread, are coming up the horizon, and, as the sunlight strikes flat against the white canvass, they look like sea-gulls spreading their wings for flight. Looking in another direction, we see the undulating line of hills, shrouded in a bluish haze, and melting into the sky. Is not all this worth coming up two more flights of stairs to have?

A room should have a picture in it; either an ideal head, or some dreamed landscape. A picture is like a beautiful window to the blank wall, which the sunshine never leaves, whereon the eye, weary with reading, may luxuriate and bathe, in a new and exhilarating atmosphere. They refine us, insensibly; they help thinking, and are full of suggestion; they are peaceful, unobtrusive friends, who wait your leisure; they are the cherished thought of some human mind—the fixed fragrance of some passing sentiment and emotion—and are transcripts of the happiest moments. We

would have flowers, too, in our room; they are so full of the warmth of humanity; nothing is so like a human being as a flower. Then what an air of delicacy and refinement is lent to a room, by pictures and flowers! Surely we read the clear, kind nature, and genial humor of Jean Paul, when we saw the rose in his button-hole! Here was the token that he was a poet.

The influences under which we are bred, domineer over us. We are like soft wax, taking the impression of all about us. The country child, whose room is nature, whose roof is the sky, whose curtains are the purple clouds of sunset, and whose carpet is the grass, is free, vigorous, and healthy, in her movements and thoughts, as the air that she breathes. The city belle, who grows up under the shade of brick walls, inhaling noisome vapors, deprived of the healthy exercise of her limbs, and “cribbed, cabined, and confined” in narrow streets, becomes puny and sickly, and fades early. The eyes of the one see the cows and sheep feeding far out on the distant hills, while those of the other hardly distinguish a face across the room. The thoughts of the one are bold, free, and untrammelled, like the flights of the eagle—those of the other, forced and conventional, like the feeble hoppings of a caged canary.

One may easily trace the rise and progress of a nation out of its barbarism, by the simple observation of their rooms. From the rude hut of the savage, which was common to all the occupants, to the modern commodious house with its appropriated rooms—what a distance! So out of a general clanish nature, grows slowly the individual nature. Society, at first one mass, becomes articulated into persons, as the body separates into fingers at the extremities: each man has his peculiar employment, according to his individual genius; and thus the huge machine of society becomes gradually perfected in all its parts. Among savages there is one general trait and employment, and therefore, there is one common room. In civilized life each has a different part to perform; all work is apportioned, and each has his own room.

As we can tell the size and formation of the tortoise from the shell which remains, so, were all history washed away, and the ancient cities left, we could easily tell the manners, habits, and genius of the people who built and inhabited them. Within one century, the city of Pompeii has been excavated—that crumbled shell of a dead people. The perfect preservation of this one city has thrown a flood of light over the Roman institutions and character, as well as given us the perfect knowledge of the habits and genius of the Pompeiians. The soul of it has, indeed,

passed away; but the naturalist easily tells the psyche, from the chrysalis that remains. Observe how perfectly the genius of the Grecian age, and even of its different districts, is developed in its architecture—the graceful and ornate Corinthian, with its curling leaves and fluted columns—the delicate and chaste Ionic, and the more stately and sober Doric; then, the transplanted composite order of Roman architecture; and last, that splendid stone flower of the middle ages, the Gothic cathedral!

What but a narrow room, wherein the spirit dwelleth, is this body—this frame of bones, this covering of muscle, but a moving house! The soul sits looking from the windows of the eyes, and can not hide itself from observation. Out of the mouth, which is its door, issue the softly-coined words, that tissue of melodious air, whose invincible nets are woven around the soul of him who hears. Within the brain lie stored, as in a magazine, the curiously-elaborated thoughts, the wild project, the dreams, fancies, experiences, and facts, that we have gathered from foreign sources, or that have had their birth in our own soul. Then, how strangely out of order seem these materials in some brains, how perfectly and precisely arranged in others! How gracefully and easily does one spirit move about this strange house, while another can never fit himself to his home, but is ever awkward and ungainly! In this natural house, the soul makes its marks and leaves its impressions, moulding and modifying continually, until the strong soul draws his outward covering closely around it, and fits it to itself, as perfectly as the kernel of the nut to its intersected shell.

For all our friends our wish is, that they may possess the chamber wherein the pilgrim lodged, according to the allegory of old John Bunyan. Somehow the passage has a sweet flavor and delicious quaintness, which he, among those earnest and sincere old English writers, most especially possesses: "The pilgrim they laid in a large upper chamber, whose window opened toward the sunrising. The name of this chamber was Peace, where he slept till break of day, and then he awoke and sang."

How full of character is the room of the painter! All there is dim and hazy with sentiment. From the moment that you close the door behind you, you feel as if you had shut out the world. There, rank takes no pre-eminence. The artist is the monarch. Here is the true luxury of work—the intellectual married to the mechanical, and love of the art prompting each motion of the pencil. The light streams in, deprived of its sunshine, through the partly closed blind. Slant-

ing toward it, stands the easel, upon which lies a half-finished picture. The painter, with his palette and brushes in one hand, and his magical wand in the other, moves this way and that, lends a tint here and a shadow there, all the time throwing in, carelessly an observation. The outlines are all dim and rounded, and there is a smell of paint in the room. Here stands the velvet chair, on its slightly elevated platform—the throne of the sitter; there stands the graceless draped lay-figure. There are no harsh noises—no bustle; all is quiet, and has a secluded air of silence. The noise of the passing wagons in the streets, if it attracts attention, seems foreign, and a consciousness that you are alone seems diffused through it. The painter talks much of his art; tells an anecdote of this artist and that; speaks of such and such a picture, and illustrates his remark by turning round to you one of the faces of those canvasses which have piqued your curiosity ever since your entrance: and thus in his studio lives the artist. The painting-room must be like Eden before the fall: no joyless turbulent passions must enter there.

Time out of mind, the garret has been appropriated to genius, perhaps from an occult pun. Whether attic wit has received, latterly, a different modification or not, we leave to the opinion of our readers. But the struggles of genius under the weight of poverty and sickness, and "all the ills that flesh is heir to," have made it, in some respects, a sacred place. Sorrow and misfortune, and the fierce flame of longing, and the illumination of hope, blend into an aureole to crown it. From its sill, the winged bird of poetry has flown—on its hearth the flame of humor and wit has burned—from its windows the stinging arrows of sarcasm have been shot—and within its walls, the souls of men have become mailed and armed by misfortune.

If we judged correctly of human character, we should admit that the mechanic who made the chair in which Xerxes sat, when he reviewed his mighty host, or witnessed the sea-fight at Salamis, was a more useful member of society than that great king—and, that the artisans who constructed the drinking vessels of Mardonius, and the brass mangers in which his horses were fed, were really more worthy of posthumous fame, than that general, or the monarch he served: and, if it be more virtuous, more praiseworthy, to alleviate human sufferings than to cause or increase them, then that old mechanic, who, when Marcus Sergius lost his hand in the Punic war, furnished him with an *iron* one, was an incomparably better man, than that or any other mere warrior.

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THE TOWER OF KOSJEDIC, WEST POINT.

WEST POINT.

THE engraving we have presented on the previous page may give to those of our readers who never beheld the original, some idea of the picturesque beauties of West Point. To be fully realized, however, it needs to be seen; for it is not within the utmost scope of the limner's pencil or the graver's art to do full justice to the magnificent river and mountain scenery there displayed. There, indeed, does the Hudson appear "an immense mirror in its mountain frame." All that is grand in the prospect of rock and mountain, or beautiful in the waves of a broad, deep river, or venerable from the associations of history and patriotism, may be seen combined in the landscape of West Point. To the left of our picture may be seen—eloquent in its very simplicity—the monument to Kosciusko, the brave Polander, who fought in our revolution, and afterward battled, martyr-like, for the freedom of his native land.

Indeed, the spot is as remarkable for memories of the past, as for its extraordinary prospect of "mountain and flood." Hallowed by the footsteps of Washington and Kosciusko—consecrated by a nation to the Spartanlike training of a few devoted sons—nor less sacredly secluded by nature as the scene of retirement and study—it seems alike calculated to please the pensive sage and the aspiring youthful soldier.

"Bright are the memories linked with thee,
Boast of a glory-hallowed land;
Hope of the valiant and the free,
Home of their youthful soldier-band."

If each bright spot on earth is indeed benignantly shone upon by some "bright, particular star," in night's splendid canopy, then may we hope that one interwoven in "memory's web," with such glorious associations, is under no despicable influence.

WEST POINT is situated upon the west bank of the Hudson, where the river makes an angle forming the point from which it derives its name. It was strongly fortified during the revolutionary war, and on Mount Independence, elevated five hundred feet above the level of the river, still stands Fort Putnam, venerable in its ruins, stern monument of a sterner age, which survived the assaults of the minions of tyranny from without and the insidious attempts of treason within. It was here that Washington, while gliding over the river in his barge, observed the mountain tinged on its summit by the rising sun, exclaimed: "It is strange that General Arnold does not salute us. The effect of the cannon would be very grand among these mountain-gorges!" But no salute greeted the approach-

ing chief, for the traitor Arnold had already fled to the "Vulture," then anchored in the channel, and his wife was alone in her desolate home, on the opposite shore. Washington stepped on the shore of West Point, accompanied by La Fayette, and Hamilton—the fortress was silent and almost untenanted. Everything was ready for the work of treason, but the hand of Providence was over all, and the schemes of the traitor, ended in his own disgrace, and the death of his friend, John André, a distinguished young British officer, whose sad fate has been regretted by many, among both friends and foes.

The United States Military Academy, which was contemplated at an early period of our national existence, with a view to the acquisition of scientific and military knowledge, and the enforcement of a uniform discipline in the army, was established here in 1802. It is situated on a plain one hundred and fifty-seven feet above tide-water. The old buildings, first occupied by the Academy, have long since gone to decay, and been replaced by the present structures. They consist of two stone barracks; a building for exercises in winter, two hundred and seventy-five feet long; a building of Gothic architecture, one hundred and fifty feet long, with three towers for astronomical apparatus and an observatory; a chapel, hospital, mess-hall, seventeen separate dwellings for the officers of the institution, several workshops, and storerooms, cavalry stables, a magazine, laboratory, soldiers' barracks, a store, and about twenty-five dwellings for families connected with the establishment. There is also an extensive hotel situated on the bank of the river.

The annual expense of the academy is about \$120,000, averaging about \$425 for each cadet. This is one fourth less than the average cost of each cadet, prior to 1817, which was not less than \$550 per annum. The library is well selected, of military, scientific and historical works, containing nearly 10,000 volumes. The philosophical apparatus lately received from France is extensive, and constructed with the latest improvements. The chymical laboratory, and mineralogical cabinet yet require enlargement.

The months of July and August, in each year, are devoted solely to military exercises; for which purpose, the cadets leave the barracks and encamp in tents on the plain, under the regular police and discipline of an army in time of war. They return from camp to barracks the last of August, and the remaining ten months of the academic year are devoted to their arduous studies. The ceremony of striking the tents and marching out of camp, is so imposing as to be well worth an effort of the visitor to be present on that

occasion. On the previous evening, the camp is brilliantly illuminated, and enlivened with music, dancing, and bevy of beautiful strangers; it presents quite a fairy scene.

The studies of the first year, are algebra, geometry, descriptive geometry, trigonometry, and the French language. All the mathematical studies are practically taught and applied to numerous problems not in the books; on the resolution of which greatly depend the reputation and standing of each rival candidate for pre-eminence. The studies of the second year, are the theory of shades, shadows, and perspective, practically illustrated; analytic geometry, with its application to conic sections; the integral and differential calculus, or science of fluxions; surveying and mensuration; the French language, and the elements of drawing, embracing the human figure in crayon. This completes the course of mathematics, and also of French; which the cadets learn to translate freely, as a key to military science, but which few of them speak fluently.

The third year is devoted to a course of national philosophy, including mechanics; optics, electricity, magnetism, and astronomy; together with chymistry, and sketching landscapes with the pencil, and topography with the pen, which complete the course of drawing.

The fourth and last year is appropriated to the study of artillery and infantry tactics; the science of war, and fortification, or military engineering; a course of civil engineering, embracing the construction of roads and bridges, railroads and canals, with the improvement of rivers and harbors; a course of mineralogy and military pyrotechny; together with the elements of rhetoric, moral philosophy, and national and constitutional law.

The graduates of the military academy are entitled by law to a preference over other applicants for commissions in the army. As the average number of vacancies is only about twenty-five annually, the army would soon be more than filled, did not a considerable number of the graduates voluntarily resign, in order to embrace other professions, particularly that of civil engineering. Although feeling under a moral obligation, to offer their services to the country in any emergency, as many did in the late war with Mexico, they deem it right, as it is freely permitted, in time of peace, to embrace other professions in which they may seek to be still more useful. Those who remain in the army are attached as brevet second lieutenants to the different corps, until they may receive higher rank on the occurrence of vacancies.

It is the great distinction of the academy at West Point, that it has contributed largely

and effectually to the elevation of the character of the military establishment. And it has accomplished a nobler service, by sending forth numbers annually, competent to superintend the construction of those chains of internal improvement, which are to be the eternal bonds of our national union. The railroads which connect the interior with the seaboard—the improved facilities of communication afforded to the whole country—the new roads which have augmented the wealth of the West, by opening new channels of communication—and the securities extended to the internal and foreign commerce of the nation, by the river and harbor improvements—these are some of the enduring memorials of the usefulness of the Military Academy, and of the returns it has made for the care and time, and money, which have been bestowed upon it. Other testimonials and other rewards have been accorded to it, by the literary institutions of our country which have invited its graduates to fill important professorships. No words can demonstrate with one half the force and impressiveness, the beneficial influence of the Military Academy, upon the characters of its members, and upon the national reputation. Within the short period of forty years, this institution, whose own high reputation is now sustained by professors, most of whom, have been educated within its walls, has not only furnished to the army gallant and accomplished officers, and to the country skilful engineers, but has sent forth principals, and professors, to ornament and sustain colleges and literary seminaries.

But while we would thus award honor, where honor is due, and show that, estimated according to her contribution of national science, the Military Academy takes a high stand, far be it from her sons to monopolize distinction, or to say that she has done more than a Military Academy ought to have done, in return for all her advantages.

HABITS OF THE ROMAN LADIES.

It has been remarked that "a fondness for adorning the person for the sake of obtaining admiration from men, is natural to all women." Now allowing this to be true, surely no one can condemn so laudable a desire of pleasing on the part of the fair sex, whatever may be its ulterior object. The female mind, for the most part, has so few important considerations wherewith to occupy itself, and so few opportunities of *publicly* displaying its judgment and taste, except in matters of dress, that we can not wonder at seeing so much at-

tention paid to it by women of every class; besides, when it is remembered that the amount expended by ladies in articles of dress and *bijouterie* by far exceeds that of the "lords of the creation" for the same purpose, a female fondness for fashion must always be considered as a national blessing, and one of the many advantages derived from a splendid court. We would, however, by no means be understood as advocating that excessive love of dress which is indulged in by some, reckless of all consequences, and which would almost induce them, Tarpeia-like, to sacrifice their country for a bracelet. The opening remark was made on the Roman ladies two thousand years ago, and it is of their different dresses that we now propose to treat; these, in splendor, richness, and gracefulness, were not surpassed even by those of the present day, if we may judge from the little insight afforded us by old Latin writers into the mysteries of a Roman lady's toilet.

The ladies of ancient Rome rose early, and immediately enjoyed the luxury of the bath, which was sometimes of perfumed water; they then underwent a process of polishing with pumice-stone for the purpose of smoothing the skin, and after being anointed with rich perfumes, they threw around them a loose robe and retired to their dressing-rooms, where they received morning visits from their friends, and discussed the merits of the last eloquent speech delivered in the senate, or the probable conqueror in the next gladiatorial combat. After the departure of their visitors commenced the business of the toilet, which occupied a considerable portion of time; the maids were summoned, to each of whom a different duty was assigned: some formed a kind of council, and only looked on to direct and assist the others by their advice and experience; one held the mirror before her mistress; while others there were to whom it was a

"—constant care

The bodkin, comb, and essence, to prepare."

With the exception of the looking-glass, the articles of the toilet were much the same as those in use at present. The glass, or more properly speaking, mirror, was composed of a highly-polished plate of metal,* generally silver, richly chased around the edges, and adorned with precious stones; this was not fixed in a frame like the modern glass, but held by a slave. The combs were formed of ivory and rosewood. Curling-tongs, bodkins, and hair-pins, were also known; the former was a simple bar of iron heated in the fire, around which the hair was turned in order to

* Looking-glasses were known to the Romans, and obtained from the Phenicians, but they were not in general use.

produce a curl; the two latter were made of gold and silver, and ornamented with pearls; it was probably with one of these bodkins that Cleopatra gave herself a death-wound, and not, as is commonly supposed, with an adder.

The use of perfumes, cosmetics, and depilatories, prevailed to a great extent among the Romans; the first were obtained at a considerable expense from India, Greece, and Persia; there are still in existence a few recipes for making the cosmetics used two thousand years ago, and which will be found to have many ingredients in common with similar preparations of our own time. Ovid gives the following, and adds that those who use it will possess a complexion smoother than the surface of their polished mirrors: "Take two pounds of Lybian barley, free from straw and chaff, and an equal quantity of the pea of the wild vetch, mix these with ten eggs, let it harden, and pound it, add two ounces of hartshorn, and a dozen roots of the narcissus bruised in a mortar, two ounces of gum, and two ounces of meal; reduce the whole to a powder, sift it, and add nine times the quantity of honey." Some used poppy juice and water, and others a pap or poultice of bread and milk, with which they completely covered the face, and kept on in their own houses; this, when removed, left the skin smooth and fair. Depilatories were used to form and adorn the eyebrows, which it was considered elegant to have joined across the nose.

On one part of a Roman lady's dressing-table might be seen her small silver tooth-brush, which, with the assistance of a little pure water, and occasionally a powder of mastic wood, formed her only dentifrice; near it stood a paper containing a black powder, which when ignited sent up a volume of thick smoke, and had the valuable property of restoring the eyes to their former brilliancy, if weakened by the gayety of the preceding evening, or by a sleepless night occasioned by the constant serenades of her lover beneath her window. Here was a bottle of the perfume of Pæstum, and there a box of rouge, and another of hair dye; on another part lay a large coil or braid of false hair, made up by a male hair-dresser, and near it were the bodkins, the chains, the rings, and hard by the richly-studded bands of white and purple which adorned the head; this braid was worn on the crown of the head, the hair from the nape of the neck being all pulled out by the roots. Continual changes were taking place in the fashion of wearing the hair; at first it was cut off as a votive offering to the gods, but the Roman ladies soon discovered that "a luxuriant head of hair was a powerful auxiliary of female beauty," and allowed it to

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grow; at one time it was worn high in bows with a range of curls in front; at another *à-la-grecque*; then allowed to float in the air in a dishevelled state, and again *à-la-militaire* in the form of a helmet. Light hair was sometimes worn over that of a naturally dark shade, auburn being the color most esteemed and admired by both sexes; those who had white or dark hair used saffron as a dye to give it an auburn tinge. Some ladies used gold dust as a hair powder, "which shed such a ray of glory around them as dazzled all beholders, and gave their heads an appearance of being on fire." When the ladies did not "wear the hair," they wore a kind of veil and a turban or bonnet, called *mitra*; this was like a bishop's mitre in shape but not so high, and with a lappet hanging over each cheek, something, in short, like a modern mob-cap, which elegant head-dress owes its origin, no doubt, to the classical mitre; thus has the Roman female head-dress descended to our times, not only as one of the insignia of the members of the right reverend bench, but also in the shape of a covering for the domestic matrons.

After having performed their ablutions, and gone through all the little delicate offices of making the complexion, perfuming the person, and endeavoring by art to excel nature, the Roman ladies were prepared to put on their costly garments, which were duly produced by the slave who had the honorable post of "mistress of the robes." In the earlier ages the under garment—which in other respects differed little from the modern—was worn as high as the chin and down to the feet, so as to leave no part of the person visible except the face; in time, however, it was cut lower and shortened; over this was worn the *tunica*, a dress composed of many folds, open at the sides and with sleeves; these sleeves were left open from the shoulder to the wrist, and fastened with clasps of gold and silver; one end of the *tunica* was fixed to the left shoulder, while the other was carried across the breast and fell negligently over the right shoulder till it touched the ground; this train was generally carried over the arm when walking, so as to show the right ankle; but it was considered *négligé* and graceful to allow it to drag on the ground instead of holding it up, and consequently was a custom much in vogue among the *distinguiés* of ancient Rome. This was the dress worn during the republic, but it is difficult to obtain a correct description of it from the very vague accounts handed down to us; probably, as in most republics, little attention was paid to dress, at all events it was plain and simple. It was not until the time of the emperors that the goddess of Fashion reared her head in the capital

of the world, when, though considerable alterations took place in dress, yet a few traits of the former style were retained. The number of garments worn varied according to the temperature of the wearer; they were generally three: the first was the simple vest; the second a kind of petticoat richly worked in front and surrounded at the waist by a belt, which answered the purpose of a corset and was formed in front like a stomacher, richly studded with jewels; then came the third garment, the *stola*, which entirely superseded the use of the ancient *tunica*; this was a robe with a small train, trimmed at the bottom with a deep border of purple and gold; it was confined at the waist by a belt, and the upper part thrown back so as to discover the embroidered front of the second garment or petticoat; on this front was worn the *laticlave*, an order or decoration of the empire granted to distinguished men, and sometimes assumed by females in right of their husbands.* Over all these was worn the *palla* or cloak, with a train of some yards in length, which fell from the shoulders, where it was fastened by two richly ornamented *fibulæ* or clasps; this train was trimmed with gold and silver, and sometimes with precious stones, and was usually carried over the left shoulder in the manner of the ample *roquelaure* worn by gentlemen. It will be seen from the above description that there is a considerable resemblance between the ancient Roman dress and the modern court dress, the former perhaps exceeding the latter in gracefulness and elegance of appearance, from its numerous folds and flowing outline. The materials of which these dresses were composed were silk, cashmere, and linen. Embroidery was procured from the Phœnicians and Assyrians; the former was most esteemed as it was raised, while the latter was smooth with the surface of the cloth. The only color used for robes was white trimmed with purple, colored clothes not being considered "*comme il faut*," among the higher orders at Rome.

The Roman stocking was of silk, generally pink or flesh-colored, over which was worn a shoe or rather boot reaching above the ankle, turned up at the point like a Chinese shoe, and laced up from the instep tight to the leg. This boot was made of white leather or the papyrus bark, ornamented with gold, silver, and jewels. Sandals were also in use; they consisted of a simple sole with riband attached to it, and was laced up like a modern sandal,

* Orders were sometimes conferred on ladies. The senate granted a riband of a peculiar pattern to the wife and mother of Coriolanus, to be worn by them in consideration of valuable services performed to the state.

at the same time supplying the place of a garter by keeping the stocking up. We are informed that coquettes used cork-soles and false insteps of cork, but never disfigured their persons by the barbarian ornaments of necklace, ring, or ear-ring.

After the Roman lady had completed her toilet she sallied out, followed by a slave, for a promenade beneath the porticoes of the Forum, where she could not only cheapen goods, but also hear what was going on in the law courts; after continuing her walk up the gentle ascent of the gay and crowded Suburra street, she returned to her own house, the threshold of which (if she happened to be unmarried) was adorned with garlands of flowers, placed there by her young patrician admirers; some of these flowers her attendants collected to fill the splendid vase which stood in her chamber, and preceded her to draw aside the curtain which supplied the place of a door into the tapestried and perfumed apartment; here she enters, and sinking softly down into an ivory and gold adorned chair, she is welcomed by the chirping notes of her favorite bird which hangs near in a gilded cage. By her side stands a beautiful page, who gently wafts a plume of peacocks' feathers around her head, while a slave presents a small stick wrapped around with, apparently, a roll of straw-colored riband, but in reality it is a letter from the young Emilius, who adopts this mode of writing in preference to the usual waxen tablet, not only because it is a fashion introduced from Greece, but because it preserves most inviolably those secrets which are only meant to meet the eye of his lovely mistress; far be it from us to pry into these secrets, so let us now bid adieu to the fair Lucretia, who begins anxiously to unroll the folds of her papyrian epistle.

INFANT EDUCATION.

To those persons, yet too numerous, who hold secular education to be limited to reading, writing, and counting, the education of infants has appeared a practical absurdity. How can *babies* be taught to read, to write, or cast accounts? We answer whatever may be effected in these accomplishments with the older children of infant-schools—and much is effected—reading, writing, and counting, form no essential parts of infant education. Infinitely higher cares demand the infant-trainer's study. The germ of mind is in his hands. That mind, which he is presumed to know in its future full development, is before him in its first feeblest manifestations—manifestations which he can recognise, and mould, and direct

aright, to the incalculable good of the individual and society; or leave undirected to all the chances of incalculable evil. His position is not merely important—it is awful; and he is unfit to occupy it whom it falls so to impress. The function of the highest and latest academical chair shrinks into insignificance when compared with the behest of him, who, in the person of a Wilderspin, was taunted as the "baby-professor."

Education begins almost with birth. What is called an infant-school is really an advanced stage, strange as it may sound to many ears. The infant-school is physically impracticable with children in the nurse's arms; they must be able to stand alone and walk, or, as a rule, to have reached the age of two years. There are then two precious valuable years to be accounted for; how have they been bestowed? The future man may have been made or marred in these two years, according as they have been devoted. The infant can not read or write, but he can perceive, and feel, and act. It is born with some mental faculties, in full capacity to act. It speedily sees, hears, tastes, smell, touches, mechanically moves and resists, and shrinks when support is withdrawn for an instant. It feels pain. It knows how to act in obedience to the instinct of food. It cries when unsupplied, and often manifests violence and passion. It is soon engaged in perceiving and examining material objects, and when gaining a knowledge of their qualities, is occupied more importantly than it will ever be in its years of mature accomplishment. Is there no field for the educator in all this? There is, and one of the most delicate and skilful cultivation. Keeping in view that education has two great ends—to train all the faculties to proper action, and to instruct the intellectual, let us make the attempt to describe the *beau-ideal* of secular education, commencing, as it ought, with *cradle-education*, soon after birth. It has been said that we can imagine a mountain of pure gold, and a sea of wine; let us then conceive what as yet is almost as unrealizable, a series of educators, ready for a fortunate human being, from his birth onward to his maturity, who are qualified, by principle and practice, to conduct every step of his training and instruction aright. To his nurse—and well for him will it be that that functionary is the nurse of nature, the mother—is assigned the deeply responsible function of commencing the course; and we are entitled to require that the child shall not be subjected to any counteracting influences from the ignorance of others around him. We presume that the mother knows infant nature physically and morally, and that the conditions of bodily health and right mental development

are both perfectly understood, and kept steadily in view by her. She is fully instructed in infant treatment, and has fully abjured all the mischievous absurdities which peril infant health, and multiply infant graves. She knows the gradual and successive development of the human faculties; she watches with intense interest the first buddings of the infant mind; she occupies its waking moments. Skill in this occupation is itself a test of the merits of a nurse. It has two important results: it exercises and thereby improves the senses and observant powers, and it diverts from the incessant importunity of the animal feelings, lessening thereby their intensity, and laying the foundation of virtuous habits. A wide difference is observable among nurses in power and disposition to amuse infants; but even the best diverter would gain yet greater purchase, if, from knowledge of the nature and mode of action of the senses and observing powers, she offered amusement which would tend to their improvement. Forms, sizes, colors, arrangement, number, relative position, and resistance, may all be made at once amusements, lessons, and exercises, to the infant; while the several senses, through which their perception gains admittance to their appropriate cerebral organs, may all be passing through a course of improvement by various judicious trials of their vigor. The relations of musical tones are often very early perceived. We have heard a part of a melody hummed, in imitation of its nurse, by an infant scarcely a year old. A singing nurse possesses a grand additional qualification for her office; there is no excitement more wholesome to the infant's spirits than a lively song, no diversion from excess of animalism more powerful. Animalism is pre-eminently present in the infant, for the wisest ends. Unqualified selfishness, in the matter of food, is essential to an infant's existence; and it can not, in its sphere, more benefit the society of which it has become a member, than by just such self-seeking. But even the infant may play the glutton, and form a habit thus early which will unfavorably characterize the adult. Organization will direct the phrenological mother in this particular; for, as the instinct manifests itself a few hours after birth, its cerebral indication is early developed. Next, in order of time, to the alimentive, the combative and destructive instincts show themselves. The plaintive wail of pain gives place, in many infants, to the sharper cry of temper, and very young infants will rage, and strike, and kick, and roar, till they are well nigh black in the face. Phrenological physiologists can tell the effect of this over-exercise on the plastic infant brain; at no later period of life will it make so deep an

impression. Then is the habit of irascibility first formed, to become more and more defiant of control, till its strength in after-life may disturb domestic and public peace, break out in acts of violence and homicide, or terminate in dangerous insanity. The enlightened mother knows all this, and watches closely the incipient signs, connecting them with the obvious organization. Then will her powers to divert be called for. For every paroxysm of temper which she succeeds in averting, will be so much gained to the moderation of the faculty's activity—of its future strength and defiance of control, till, like the skilful physician, who, by mitigating the periodical attacks of disease, lessens at once their frequency and severity, she has succeeded in forming a character of patience, and even gentleness, compared with what would have resulted from leaving, as is yet too much the course to do, the combative and destructive impulses to their own wild way—and society to make fruitless laws for restraining them.

In the course of the two years of what may be called the nursery period, other faculties, still of the inferior and selfish class, will, in various degrees, but always according to organization, successively exhibit themselves. The germs of faculties, which in excess are covetousness, cunning, pride, vanity, and obstinacy, will be found to answer to organization; and the well-prepared mother will detect them, when to others, they would remain invisible; till, at a later period, they become unmistakable, from the domestic annoyance which they occasion. These are the manifestations of faculties planted in the human constitution for wise and good ends, when not in abuse, of which abuse the above series are the names. The skilful nurse will guide them aright, and present them with their proper objects. She knows that she will find the largest organs certainly the most tending to excessive and unfavorable manifestation, and to these her corrective attention will be chiefly directed. Her powers of diversion must never fail her. As with passion, so with obstinacy, she must divert the infant from its exciting causes, and never contend with it; and so of all others; she will avoid an unwise or thoughtless purveyance of their objects.

Having succeeded, as she will not fail to do, if there be no more than an average endowment of the animal propensities, in producing at least the negative qualities of patience, moderation in food, and absence of cunning, greediness, obstinacy, and infant vanity and self-esteem, should the signs of the last two appear, she will welcome the first gleams of the higher unselfish feeling of benevolence. This will first appear in the passive and negative form of a gentle sweet-

ness, but may be directed into the positive channel, as the two years move on, of kindness to domestic animals, protection to insects, acts of affection to other children and adults, and of readily parting with cherished objects, or shares of them, as gifts. It is not likely that, in average cases, such manifestations will go much further; but daily, nay hourly, exercise thus far, will be of inestimable value, and will tell for life upon the general character. By the time of the second anniversary of our *élève's* birthday arrives—presuming, as we do, that the perceptive powers have received constant exercise, so as to be strengthened, and stored with knowledge of things and their qualities which present themselves in nursery life—there will be introduced to the *infant school* a subject admirably prepared for the more advanced course which will begin in that valuable seminary. With just pride and hope the excellent mother will hand her child over to the infant-school teacher. She has done a duty of high dignity in the moral world—a duty which, if universal, would change the face of human society, and elevate man to a rank, really, and not nominally, only a little lower than the angels, and more in conformity, than history has ever recorded him, with the image in which he was created. But, alas! when shall such things be! When shall we see such children—when such mothers!

Our *élève* is now introduced to the little world of the infant-school, where he will enjoy advantages denied to the solitude of the nursery. He mingles with numbers, of which element the importance in the formation of his character is obvious. He finds his fellow-men in a variety of aspects, with a variety of characters resembling and differing from his own, in his intercourse with whom he will find use for all the faculties he possesses which imply social existence as man's destiny. Some of these, in their manifestations in his companions, may encroach on his right to his food, others on his little property; some may touch his self-esteem, others mortify his love of approbation, and in other ways try his forbearance: such feelings it will be the daily lesson and exercise of the place to control in himself, and forgive in his less worthy playmates, and he will be led to love his little enemies, if so they may be called, and requite them good for evil. Such, he will learn, is the practice of good and great men; and no man is great who is not also good.

The training of the faculties, begun in the nursery, will proceed in the infant-school, and on a more extended scale. They will be strengthened by much opposite instruction, example, and exercise. The effect of an innocent rivalry in being and doing good will

soon show itself, and no one who is conversant with infant-schools is ignorant of what may really be called, in reproach of general society, the high moral standard which guides the intercourse of the little community.

It is unnecessary to detail at length the curriculum of a good infant-school. Works on the subject are numerous. Those of Wilderspin, the great improver of these seminaries, are well known. The number of *Chambers's Educational Course* entitled "Infant Education," is itself a concise guide, from which a judicious person might establish and conduct an infant-school. The moral branch of the system must ever be held the most important. In order to direct this branch aright, the teacher, like the mother, must intimately know the faculties, both animal and moral, which all act blindly, as mere feelings, unless guided by an improved intellect. The best infant-school teachers we have met with are practical phrenologists. Such easily ascertain the diversities of organization. But they possess other advantages. Aware of the faculties, they observe and distinguish their marked manifestations, and know well how to meet them with restraint or encouragement, as respectively required. The animal or selfish faculties generally require the rein—the moral or social the spur; and delicately and judiciously, will an accomplished infant teacher use either. His moral lessons will inculcate how the selfish faculties may be abused, and how invariably, by the Creator's moral laws, such abuse, besides defeating its own end, is followed by suffering—and not less certainly how the exercise of mercy and truth bring not only delight in their exercise, but reward in their consequences. Lessons of temperance tell admirably on the pupils of infant-schools. A horror of drunkenness, and a knowledge of all its evil consequences, are most satisfactorily prevalent in many an infant-school; and often has a child, with its impressions lisped forth at home, shamed a thoughtless parent into sobriety, and been known to bring him from the ale-bench, when his wife's endeavors have been brutally repelled. Mercy and kindness to animals, protection to the weak and imbecile, respect for inanimate destructible things—delicate attention to avoid annoying others by troublesome uncleanly practices—willing obedience to rules and regulations—punctuality—respectfulness and affection to superiors—love to equals, and kindness to all, have all been realized in well-conducted infant-schools.

The intellectual branch of infant education, though secondary, is not neglected in a school when such as it ought to be. There is no cramming and overworking the knowing or reflecting faculties. The teacher knows the

danger as well as the fruitfulness of such a course. He is well aware of the premature deaths of precocious children, ignorantly and vainly overworked. He knows that while the moral organs are strengthened by exercise, the intellectual are injured by task-work. His lessons addressed to the latter must be incidental, having much of the nature of play, and never too long continued at a time. Much may be insensibly communicated in this way. Lessons on objects and their qualities may be rendered intensely attractive as well as instructive, till a great amount of useful elementary knowledge is required; and experience has shown that many children, in the four years, from two to six, during which they have attended a good infant-school, have incidentally, and as so much pleasure, acquired a most respectable stock of knowledge, and mastered reading, and the elements of arithmetic, and geography besides.

"All this imparted to your *élève* without a single religious lesson!" will probably be the exclamation of many. We answer, "None of it without religious lessons." A teacher of the young, who is himself imbued with the belief that nature's laws are of God's appointment, in their most stupendous and minutest relations—that he governs the physical, and not less the moral world, by fixed laws, which his intelligent creatures are bound to learn and obey—that the exquisite adaptations of these laws, when obeyed, to the happiness of sentient beings demonstrate a benevolent, and the sufferings he has attached to disobedience, a just Being—it is morally impossible, we say, for such an instructor to give a lesson in either physical or moral truth without discerning the present God in his own mind, and loving him in his own heart; and imparting that knowledge and that love, by instruction and sympathy, to his pupils. When a teacher's attention was confined to conveying the practice of mere instruments, as reading and writing, he could not lay the foundation of religious feeling in his pupils. Hence arose the supposed necessary practice of imparting scriptural, and even doctrinal religious instruction, to absolute infants, while the whole religion of God's natural revelation, unknown as it was to the instructor, was a sealed book to the instructed. Such is not the course to which our supposed *élève* would be subjected; he would be brought to discover, so to speak, a powerful, wise, and good God, in his own existence, and the simple and intelligible arrangements, which surround him and give him enjoyment and happiness; till a practical conviction that God is, and that he governs the world, would be fixed in his young mind, which would through life secure his adoration; while a feeling of grati-

tude for his goodness, would equally secure his love. A deep feeling of piety may be kindled in the infant bosom by an accomplished infant-school teacher.

In school, where are assembled the children of parents of every variety of Christian doctrine, and of some perhaps whose belief is not the Christian faith, our perfect system would rigidly exclude the introduction of the infant mind to what must be the teacher's own special religious belief and opinions. We have presumed an enlightened mother at home, who will have well considered and conscientiously fixed her own faith, and carefully selected her religious pastor. She and he will best determine the time and the way of her beloved child's introduction to the path which leadeth to a kingdom not of this world—to eternal salvation. Who will dare to anticipate the sacred teachings of this inner school; or inculcate faiths and forms which that school may repudiate, nay, it may be, abhor? But joyfully will the favored child be received into that sacred sanctuary, imbued, as he will be, as a foundation for other instruction, with a knowledge and love of God as revealed in his natural creation.

We should perhaps have described sooner the provisions made in the infant-school for physical education. A playground is not only essential for such a seminary, but is the chief department of it. Bordered with the neatest cultivation, stocked with the choicest flowers, adorned with tasteful and even fragile erections of taste, all to practise in refinement and care, it has an ample space for exercises, befitting the age of the pupils. In this place, with its fresh air, more than half their time at school is spent, their sittings in school at one time being short; and here their intercourse is free, and their social feelings the better exercised.

No child arrived at six years of age, who is not unfortunately organized, a subject to be watched in after-life, can leave an infant-school without much of that improvement, that formation of character, which education that at once trains and instructs, must necessarily produce. Our supposed *experiment*, having joined the school with the best maternal preparation, and reaped all its benefits the more easily and perfectly because of that preparation, all the school lessons and the school exercises seconded and enforced at home, the health and strength improved, he it is that will do most credit to the second stage of his education, the infant-school, and prove its incalculable advantages.

We are prepared to hear that such views are visionary and Utopian. We deny it: they are eminently practical—nay more, they are practicable; and extreme as they may appear, they will yet be universally realized.

BURNING A PRIEST IN SIAM.

THE death of a Ponghee, or president of a kyoung is regarded as a great event, and the funeral is conducted with pomp and ceremony. The body, being emboweled, and its juices pressed out, is filled with honey, and swathed in many folds of varnished cloth. The whole is coated with beeswax; that which covers the face and feet being so wrought as to resemble the deceased. These parts are then gilded. The body often lies in state many months, on a platform highly ornamented with fringes, colored paper, pictures, &c.

During my stay at Tavoy, occurred the funeral of a distinguished Ponghee. Its rarity, and the great preparations which had been made for it, attracted almost the entire populace. The body had been lying in state, under an ornamental canopy for several months, embalmed in Burman fashion. The face and feet, where the wax preserved the original shape, were visible, and completely gilded. Five cars on low wheels had been prepared, to which were attached long ropes of ratan, and to some of them at each end. They were constructed chiefly of cane, and not only were in pretty good taste, but quite costly withal, in gold leaf, embroidered muslin, &c.

When the set day arrived, the concourse assembled, filling, not only all the zayats, but all the groves, dressed in their best clothes, and full of festivity. Not a beggar or ill-dressed person was to be seen. Almost every person of either sex, was dressed in silk; and many, especially children, had ornaments of gold or silver in their ears and round their ankles and wrists. Not an instance of drunkenness or quarrelling came under my eye, or, that I could learn, occurred on either day. The body in its decorated coffin was removed, amid an immense concourse, from its place in the kyoung to one of the cars, with an excessive din of drums, gongs, cymbals, trumpets, and wailing of women. When it was properly adjusted in its new location, a number of men mounted the car at each end, and hundreds of people grasped the ropes, to draw it to the place of burning, half a mile distant. But it had not advanced many paces before those behind drew it back. Then came a prodigious struggle. The thousands in front exerted all their strength to get it forward, and those behind with equal energy held it back. Now it would go ten or twelve paces forward, then six or eight backward; one party pretending their great zeal to perform the last honors for the priest, the other declaring they could not part with the dear remains! The air was rent with the shouts of each party to encourage their side to exertion. The other cars of the procession were dragged

back and forth in the same manner, but less vehemently. This frolic continued for a few hours, and the crowd dispersed, leaving the cars on the way. For several days the populace amuse themselves in the same manner; but I attended no more, till informed by the governor that at three o'clock that day, the burning would certainly take place.

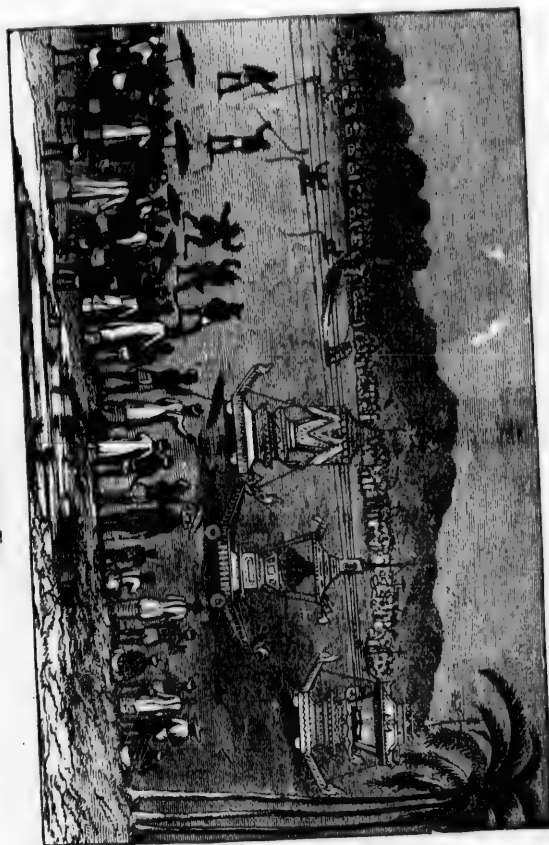
Repairing again to the spot, I found the advancing party had of course succeeded. The empty cars were in an open field, while that which bore the body was in the place of burning, enclosed by a light fence. The height was about thirty feet. At an elevation of fifteen or sixteen feet, it contained a sort of sepulchral monument, like the square tombs in our churchyards, highly ornamented with Chinese paper, bits of variously colored glass arranged like flowers, and variously mythological figures; and filled with combustibles. On this was the body of the priest. A long spire decorated to the utmost, and festooned with flowers, completed the structure. Soon after the appointed hour, a procession of priests approached, and took their seats on a platform within the enclosure, while in another direction came "the tree of life," borne on the shoulders of men, who reverently placed it near the priests. It was ingeniously and tastefully constructed of fruits, rice, boxes, cups, umbrellas, staffs, raiment, cooking utensils, and in short, an assortment of all the articles deemed useful and convenient in Burman housekeeping. Women followed, bearing on their heads baskets of fruits and other articles. All these offerings, I was told, were primarily for the use of the deceased. But as he only needed their spiritual essence, the gross and substantial substances remained for the use of the neighboring monastery.

"The priests, with a small audience of elder persons, now mumbled over the appointed prayers, and having performed some tedious ceremonies, retired. Immediately, sky-rockets and other fireworks were let off, at a little distance. From the place of the pyrotechnics, long ropes extended to the funeral cars, to which were fastened horizontal rockets bearing various pasteboard figures, as may be seen in the engraving. Presently, men with slow matches touched off one of these; but it whizzed forward only a little way and expired. Another failed in the same manner, and shouts of derision rose from the crowd. The next rushed forward, and broke a portion of the car, which called forth strong applause. Another and another dashed into the tattering fabric, while several men were seen throwing fagots and gunpowder into it, till finally, a furious rocket entering the midst of the pile, the whole blazed up, and the poor priest was exploded to heaven! Fancy fire-

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Burning a Priest at Tavoy, Siam.



works concluded the ceremony, and the vast crowd dispersed. In the background of the picture are hucksters vending fruits, &c., and in the centre some musical buffoons.

Rev. H. Malcom's Travels.

THE HOUSE OF ROTHSCHILD.

It is usual to trace the origin of great families to some gallant exploit, or some lucky accident, which suddenly raised the ancestor of the house from obscurity, and provided him at the same time with a legend to his coat of arms. The representatives of such families are born personages of history; their name, title, and estate—their position in the country—descending to them by inheritance, and so continuing from generation to generation, till war or revolution damages or removes the old landmarks of society. But there are other origins which it would be vain to endeavor to arrive at by a similar process; the origins of houses that rise steadily, not suddenly, in their peculiar career, and the success of which is not secured by a single incident, but distributed evenly over the lifetime of one or more generations. In such cases, the germ of prosperity must be sought for in the family mind—in the idiosyncrasy of the race—in the theory by which their conduct in the world is governed; and not the first accident, which attracts the attention of the vulgar as the origin of their fortune, is merely a *point d'appui* selected by forethought and resolution. The rise of the house of Rothschild presents a very remarkable illustration of his view of a question which will never cease to be interesting, and affords a striking instance of the natural and simple means by which those vast results are obtained which it is customary to ascribe to chance or miracle.

In the middle of the last century there lived, in the town of Frankfort-on-the-Maine, a husband and wife of the Hebrew persuasion, who lavished all their cares upon a son, whom they destined for the profession of a schoolmaster. The boy, whose name was Meyer Anselm Rothschild, and who was born at Frankfort in the year 1743, exhibited such tokens of capacity, that his parents made every effort in their power to give him the advantage of a good education; and with this view he spent some years at Firth, going through such a curriculum of study as appeared to be proper. The youth, however, had a natural bent toward the study of antiquities, and this led him more especially to the examination of ancient coins, in the knowl-

edge of which he attained to considerable proficiency. Here was one step onward in the world; for, in after years, his antiquarian researches proved the means of extending and ratifying his connexions in society, as well as of opening out to him a source of immediate support. His parents, however, who were noted as pious and upright characters, died when he was yet a boy, in his eleventh year, and on his return to Frankfort he set himself to learn practically the routine of the counting-house.

After this we find him in Hanover, in the employ of a wealthy banking-house, whose affairs he conducted for several years with care and fidelity; and then we see opening out under his auspices, in his native city, the germ of that mighty business which was destined to act so powerfully upon the governments of Europe. Before establishing his little banking-house, Meyer Anselm Rothschild prepared himself for the adventure by marrying; and his prudent choice, there is no doubt, contributed greatly to his eventual success in the world.

About this time a circumstance is said to have occurred, to which the rise of the Rothschilds from obscurity is ascribed by those who find it necessary to trace such brilliant effects to romantic and wonderful causes. The prince of Hesse-Cassel, it seems, in flying from the approach of the republican armies, desired, as he passed through Frankfort, to get rid of a large amount in gold and jewels, in such a way as might leave him a chance of its recovery after the storm had passed by. With this view he sought out the humble money-changer, who consented reluctantly to take charge of the treasure, burying it in a corner of his garden just at the moment when the republican troops entered the gates of the city. His own property he did not conceal, for this would have occasioned a search; and cheerfully sacrificing the less for the preservation of the greater, he reopened his office as soon as the town was quiet again, and recommenced his daily routine of calm and steady industry. But he knew too well the value of money to allow the gold to lie idle in his garden. He dug it forth from time to time as he could use it to advantage; and, in fine, made such handsome profits upon his capital, that on the duke's return in 1802, he offered to refund the whole, with five per cent. interest. This of course was not accepted. The money was left to fructify for twenty years longer, at the almost nominal interest of two per cent.; and the duke's influence was used, besides, with the allied sovereigns in 1814 to obtain business for "the honest Jew" in the way of raising public loans.

The "honest Jew," unfortunately, died two years before this date, in 1812; but the whole story would appear to be either entirely a romance, or greatly exaggerated. Rothschild must have already been eminent as a banker, or he would hardly have been selected by the prince of Hesse-Cassel as the depositary of a sum amounting, it is said, to \$450,000, exclusively of the jewels. At any rate, it was in the year 1801 he was appointed agent to the landgrave, afterward elector of Hesse; and in the next year (indicated in the story as that of the prince's return) a loan of ten millions was contracted with the Danish court through the house of Rothschild. Before this—and necessarily so no doubt—his knowledge, and the tried rectitude of his conduct, had gained him general confidence; his wealth had increased, and an enormous extension of the field of his operations had taken place. The fact appears to be, that by this time the banker of Frankfort was more in the habit of rendering assistance than of requiring it; and the grand duke of the day, to whom the Israelites owed their civic and political rights, nominated him a member of the electoral college, expressly as a reward for his generous services to his fellow-citizens.

The personal character of Meyer Anselm Rothschild is not of small consequence in the history of the house—for their dead father may be said to direct to this hour the operations of his children. In every important crisis he is called into their counsels; in every difficult question his judgment is invoked; and when the brothers meet in consultation, the paternal spirit seems to act as president. The explanation of this well-known and most remarkable trait in the family is not difficult to those who are in the habit of penetrating through the veil of the romantic, in order to arrive at the simple realities of life. The elder Rothschild was obviously a man of comprehensive intellect, who did not act on the spur of chance or necessity, but after mature reflection, and on rules distinctly laid down; and he must have brought up his children in a certain theory, which survived his mortal part, and became identified with his memory. This is the only *idolum* conjured by the piety of his descendants. His bearing, we are told, was tranquil and unassuming; and although a devout man, according to his views of religion, his devotion was so completely untinged with bigotry, that in his charities he made no distinction between the Jew and the Christian.

In 1812, Rothschild left to the mighty fortunes of which his wisdom had laid the foundation, ten children—five sons and five daughters; laying upon them, with his last breath, the injunction of an inviolable union. This is one of the grand principles to which

the success of the family may be traced. The command was kept by the sons with religious fidelity. The copartnership in which they were left, remained uninterrupted; and from the moment of their father's death, every proposal of moment was submitted to their joint discussion, and carried out upon an agreed plan, each of the brothers sharing equally in the results. The other great principle of their conduct is one which actuates all prudent men, and is only deserving of special remark in them, from the almost mechanical regularity with which it was acted upon, this was the determination never to run the slightest risk in pursuit of great profits. Their grand object was to see clearly each transaction to its termination; to secure themselves from all accidents that human forethought could avert, and to be satisfied with a reasonable and ordinary reward. The plan acted in a twofold manner. By husbanding their capital they were enabled to take advantage of a thousand recurring commissions, so as to extend their connexion day-by-day; while their habitual caution earned for them a reputation of solidity, which, united with their real wealth, carried their credit to a pitch which would have been dangerous, if not fatal, to less steady intellects. Credit, however, was no treasure to them. They affected no master-strokes—no *coups d'état*. They would have used the lamp of Aladdin, not to summon gold out to light their steps as they toiled on the path of genius. The only secrets by which they obtained their choice of innumerable offers of business, were the moderation of their demands—the punctual fulfilment of their engagements—and the simplicity and clearness of their system. In short, the house of Rothschild became great because its affairs were conducted upon the most perfect system of mercantile tactics, and because the character of its members, partaking largely of that of the original banker of Frankfort, combined many of those amiable qualities which secure popularity without forfeiting respect. They sought to make money by skill and industry, not parsimony; they gave a liberal share of their profits to all whose services were of use in attaining them; and their hand—

"Open as day to melting charity"—

doubled the value of the gift by the grace with which it was presented—the grace impressed upon the external manner by a simple and kindly heart.

We may now mention another circumstance which, on various occasions, must have contributed largely to the mercantile success of the family. Although their real union continued indissoluble, their places of residence were far asunder, each member of the house

domiciling himself in a different country. At this moment, for instance, Anselm, born in 1773, resides at Frankfort; Solomon, born in 1774, chiefly at Vienna; Charles, born in 1778, at Naples; and James, born in 1792, at Paris. The fifth brother, Nathan, born in 1777, resided in London, and died at Frankfort in 1837. The house was thus ubiquitous. It was spread like a network over the nations, and it is no wonder that, with all other things considered, its operations upon the money-market should at length have been felt tremblingly by every cabinet in Europe. Its wealth in the meantime enabled it to enjoy those advantages of separation without the difficulties of distance. Couriers travelled, and still travel, from brother to brother at the highest speed of the time; and these private envoys of commerce very frequently outstrip the public expresses of government.

We have no means of giving anything like the statistics of this remarkable business; but it is stated in the "Conversations Lexicon," that in the space of twelve years from 1813—the period, we may remark, when war had ruined all Europe, and when governments were only able to keep themselves afloat by flinging the financial burden upon posterity—from eleven to twelve hundred millions of florins (\$500,000,000 to \$600,000,000) were raised for the sovereigns of Europe through the agency of this house, partly as loans, and partly as subsidies. Of these, 500,000,000 florins were for England; 120,000,000 for Austria; 100,000,000 for Prussia; 200,000,000 for France; 120,000,000 for Naples; 60,000,000 for Russia; 10,000,000 for some of the German courts; and 30,000,000 for Brazil. And this, it is added, is exclusive "of those sums for the allied courts, of several hundred millions each, which were paid as an indemnity for the war to the French, and likewise of the manifold preceding operations executed by the house as commissioners for different governments, the total amount of which far exceeded the foregoing." This, however, may already be considered an antiquated authority; for, in reality, the vast business of the firm can hardly be said to have commenced till after the dozen years referred to had expired. Since the year 1826, the house of Rothschild has been the general government bankers of Europe, and if it were possible to compare the two circles of transactions, the former would seem to dwindle into insignificance.

In 1815, the brothers were appointed counsellors of finance to the then elector of Hesse; and in 1826, by the present elector, privy counsellors of finance. In 1818, they were elected to the royal Prussian privy council of commerce. In Austria, they received, in

1815, the privilege of being hereditary landholders; and in 1822, were ennobled in the same country with the title of baron. The brother established in London was appointed imperial counsel, and afterward counsel-general; and in the same year (1822) the same honor was conferred upon the brother resident in Paris. The latter, the Baron James, has the reputation of being the most able financier in France; and it is mainly through his assistance and influence with the other capitalists that railways are now intersecting the length and breadth of the land.

Nathan, the brother who resided in England, left four sons, three of whom rank among the most distinguished aristocracy of the British capital; the fourth, Nathan, residing in Paris. The eldest, Lionel de Rothschild, is privileged, as a British subject, to bear the title of an Austrian baron; his brothers being barons only by courtesy. The second has been recently created a baronet of England, as Sir Anthony de Rothschild; and the third, Baron Meyer, is now high sheriff of Buckinghamshire. Baron Lionel de Rothschild was invited by the reform association to stand as a candidate with Lord John Russell for the representation of London in the present parliament, and was returned third on the list.

Most of the members of this family have married, and live in great splendor; and it must be observed, as something characteristic of the race, that their choice of wives has usually been a good one. In London, where we know them best, the widow of Baron Nathan is held in great esteem for her inexhaustible charity, in the course of which, we observe by the newspapers, she has contributed largely toward the formation of an educational institution for children of the Christian faith. Her sister, the lady of Sir Moses Montefiore, is popularly known as a suitable helpmate for her philanthropic partner. The sister of Baron Nathan, widow of the brother of Sir Moses Montefiore, is likewise well-known for her liberality, and more especially for the large funds she has bestowed on the establishment of schools for all religious denominations.

But there is another female of this remarkable family whom we must mention in a special manner, and with her name we conclude. She is the widow of the banker of Frankfort, the mother of the five brothers, and grandmother of those flourishing men who are now rising proudly among the aristocracy of Europe. The following notice of this venerable and venerated lady we take from "Les Matinées du Samedi" of G. Ben Levi: "In the Jews' street at Frankfort-on-the-Maine, in the midst of Gothic façades, black copings,

and sombre alleys, there is a house of small exterior, distinguished from others by its luxurious neatness, which gives it an appearance of singular cheerfulness and freshness. The brass on the door is polished, the curtains on the window are as white as snow, and the staircase, an unusual thing in the damp atmosphere of this dirty quarter, is always dry and shining.

"The traveller who from curiosity visits this street—a true specimen of the times when the Jews of Frankfort, subjected to the most intolerable vexations, were restricted to this infected quarter—will be induced to stop before the neat and simple house, and perhaps ask, 'Who is that venerable old lady seated in a large arm-chair behind the little shining squares of the window on the first story?' This is the reply that every citizen of Frankfort will make: 'In that house dwelt an Israelite merchant, named Meyer Anselm Rothschild. He there acquired a good name, a great fortune, and a numerous off-spring; and when he died, the widow declared she would never quit, except for the tomb, the unpretending dwelling which had served as a cradle to that name, that fortune, and those children.'

"Continued prosperity has attended the sons of the pious and modest widow. Their name is become European, their wealth proverbial. They inhabit sumptuous palaces in the most beautiful quarters of Paris, London, Vienna, Naples, and Frankfort; but their mother, persevering in her admirable modesty, has not quitted her comparatively humble house, where those sons come to visit her with respect and reverence, and discharge their duties in memory of their estimable father, thus presenting bright examples for the present time."

TEARS.

THE connexion between laughter and tears, is so close that the latter is often the natural sequence of the former—an overflowing of the eye being an unfailing accompaniment of the convulsion of mirth. In the midst of life we are in death; in the midst of laughter we are in tears! But the strange association does not end here; for weeping produces joy, by relieving and solacing the wounded heart; and through the gloomy portals of the grave we pass into immortal life.

Weeping is an earlier affection than laughter. The former comes to us with our first inflation of the lungs by atmospheric air; but we are not sufficiently reconciled to the world to laugh at it for some little time. Crying is easy:

we take to it by instinct the moment we are born; but we require a month or two, and sometimes more than that, to find out the jest of life. We do not know all at once what people mean by poking us in the ribs, pinching our cheeks, throttling us with their kisses, and addressing us in an unknown tongue. But the fun of the thing at length dawns upon us, and then becomes clearer and clearer, till, beginning with a smile, we get in time to a downright crow. Weeping is not only first, it is likewise last. The tears of infancy are renewed in old age; and the same salutation we give the world at meeting suffices for our farewell. But midway between these two points we are freer from the emotion. Equidistant from the softness of youth and the weakness of age, the "mortal coldness of the soul" comes down over our manhood like death:—

"That heavy chill has frozen o'er the fountain of our tears,
And though the eye may sparkle still, 'tis where the ice appears!"

Weeping is not only first and last, it is a necessary condition of perfect life. Laughter no doubt is wholesome, from its effect upon the lungs and the circulation; but tears are indispensable to the sight. Some people get on very well without laughing; but we must all look at the world through our tears, or else not look at all. Without this moisture, the eye would lose its brightness, the cornea would wither and dry up, and we should become blind. Laughter is an accident, an exception, a liberty taken with nature; and after the convulsion is over, our features recompose themselves into deeper gravity than before, as if in remorse for their extravagance. Tears, on the other hand, are a normal suffusion that is necessary to the organ of sight; and after their effusion in weeping, we feel refreshed and thankful—the grief that has called them forth being softened by the shower, just as any acrid matter that may enter the eye is diluted by its protecting tear.

But although grief may be the most common cause of weeping, it is by no means the sole cause. Joy, surprise, sympathy, and other emotions, affect us in the same way. When long-severed friends meet again, they not unfrequently weep. Thus Joseph was so affected by the meeting with his brethren, that "he made haste, and he sought where to weep; and he entered into his chamber, and wept there." Among savages there is a great difference in this respect. The American Indian would think his manhood foully stained by a tear; while among the New-Zealanders, weeping is practised as an accomplishment by the chiefs, who consider it

still more necessary to be able to cry well than fight well. The western strangers, they remark, meet their friends like so many dogs—civilized dogs of course they mean—giving each other a paw. As for themselves, they not only embrace, and rub noses, but then sit solemnly down face to face, and drawing their mats over their heads, weep for joy, as if their hearts were breaking.

Triumph, after severe suspense, moves man to tears as commonly as the joy of meeting. Laughter is said by some writers to be a manifestation of this proud feeling; but the same thing might be said more correctly of weeping. We remember, when visiting the church of Notre-Dame at Mantes, being much struck with the loftiness of the vault of the nave, from which some men, engaged in whitewashing the roof, swung in barrels, looking like so many spiders. When this vault was built, and the supports were about to be withdrawn, Rudes de Montreuil, terrified at the boldness of the arch he had constructed, did not dare to look on, but went home, and there awaited the result in the agony of suspense. Judge of his feelings when he heard at length the hasty steps of his nephew, whom he had deputed to witness the operation. "It stands! it stands!" cried the young man, bursting into the room, "an immortal monument of your fame!" At the words, the architect fell to the ground, as if struck down with a blow, and burst into a passion of tears.

The constructor of the first Menai bridge had more nerve than Rudes. He looked on while the last chain was fastening, when in another moment the fate of his remarkable work would be determined; but success had the same effect upon him as upon the French architect, and when he saw that all was safe, he burst into tears. A feeling somewhat different from this, united with home recollections, affected Bruce when he saw the object of his adventurous wanderings completed; and his full heart saluted the source of the Nile, not with exclamations of wonder and exultation, but with silent tears.

No more than this! What seemed it now
First by that spring to stand?
A thousand streams of lovelier flow
Bathed his own mountain land!
Thence far o'er waste and ocean track,
Their wild sweet voices called him back.
He wept—the stars of Afric's heaven
Beheld his bursting tears,
E'en on that spot where fate had given
The meed of toiling years!
O happiness! how far we flee
Thine own sweet paths in search of thee."

But tears are not only called forth by opposite feelings, they are likewise the cause of opposite phenomena.

"I saw thee weep—the big bright tear
Came o'er that eye of blue!
And then methought it did appear
A violet dripping dew:
I saw thee smile—the sapphire's blaze
Beside thee ceased to shine;
It could not match the living rays
That filled that glance of thine."

It did not perhaps occur to the poet that these two effects were produced by the same cause, and that his mistress's eye owed its brilliance, as well as its softness, to a tear. The power attributed to the eye in itself is in great part a delusion. It is not a kind of *soul*, as people are fond of representing it, but a mere body, owing its greater or less brightness to the greater or less adaptation of its color for reflecting light through the lachrymal liquid. Its expression is determined, in great part, by the other features, but more especially the mouth. Look at the face of a blind man, and you will see that it expresses the passions pretty nearly as well as that of a man endowed with sight—wanting only the effect of moisture in the eye, the quantity of which is to a certain degree indicative of the emotion.

We tried recently an experiment on this question, the converse of that of the blind man; putting out the other features instead of the eye, and leaving that alone to tell its story. This was accomplished by means of a paper mask, which hid the whole face with the exception of the eye; and our subjects being chiefly young ladies, it may readily be supposed that we obtained as much expression as nature intended to give. But what an expression! If you have ever witnessed the unnatural effect of a glass eye, think of what *two* would have. While the paper-mask was quivering, and the whole frame convulsed with suppressed laughter, there stood the eyes, staring straight forward, cold, stony, mute, spectral, destitute of feeling and of life. There was something strange, almost shocking in the contrast; but when the mask was torn off, and the young and mirthful face disclosed entire, the expression at once returned in a flood of light, and the rekindled eyes laughed till they wept.

The lower animals bear testimony to the same thing. In them we often meet with an expression of either amiability or moroseness; but this is without variety, except in those species gifted with mobility of feature. The cat, for instance, who has no such mobility, except on extraordinary occasions, looks invariably grave, even in the midst of her wildest gambols. The dog, on the other hand, having the power of imitation, has a decidedly human smile when he chooses, and can easily be moved to tears by soft and melancholy tones. But we were once very

intimately acquainted with a lady's lapdog, which followed its mistress in something more than her smiles and tears. This little animal was of the most delicate organization, and of so nervous a temperament, that on meeting a beloved friend after a long absence, the joy was overpowering, and poor Fanny fainted away. This curious manifestation of sensibility we have repeatedly witnessed, although only in the case of the same individual of our canine friends.

With regard to the human species, it is not only in the important circumstances and great emergencies of life that tears come uncalled for; they are produced by a thousand sympathetic emotions, so slight and evanescent, that we can hardly trace their nature or their track. A trait of generosity or nobleness of feeling—a picture of hopeless devotion—a scene of humble happiness—a breath of music—a word—a look, associated with our early recollections—all may cause a sudden suffusion in the eyes, wanting only opportunity to overflow. A deep tragedy affects us in this way less than a little touch of sentiment occurring in a comedy. Our taste may be gratified by the pictured griefs of princes and heroes, but our tears rise more freely in obedience to some thrill of the chord of our everyday feelings and sympathies. Among tragedies, those are the most successful in touching us which the heart can translate into common language, and remove into the humble sphere of its own affections.

It is impossible that a comedy can make us laugh which does not here and there make us sad and tearful. No one can laugh through several acts, any more than he can refrain from yawning after the first few pages of a jest-book. We want contrast to give relief, to carry us on from point to point, to give piquancy to the entertainment. The mind needs no repose, but it must have variety. When tired of one thing, it applies itself to another of a totally different kind—just as a tailor gets up to rest himself by standing. Tears and laughter, besides, are natural associates; a fact which was impressed upon us many years ago by the admirable acting of the elder Mathews, in a trifling little comic piece called "My Daughter's Letter." He personified an old Frenchman in Canada, who was constantly calling at the postoffice for a letter from his daughter, and was as often disappointed. Here were slight materials—but Mathews was a man of genius; and he so contrived, with his pathos and absurdities, his French broken by English, and English broken by French, and the universal language of nature over all, to keep the audience in a continuous alteration of sobs and laughter. Never did we hear such manifestations of

grief—never behold such enjoyment of fun. One moment everybody was drowned in tears, and nothing was heard but catching of breaths and blowing of noses; the next a general burst of laughter swept round the house like a tempest.

A living poet desires of chymistry to turn a tear into a gem, that he may wear it on his bosom:—

"Oh that the chymist's magic art
Could crystallize this sacred treasure,
Long should it glitter near my heart,
A secret source of pensive pleasure!"

But as the great bulk of tears consists of water, with only a very small portion of saline substances, it might be difficult to obtain from them in sufficient quantity (unless perhaps in New Zealand) even such evanescent crystals as are left by evaporation. The ordinary use of tears is to wash and moisten the eye, for which a small quantity suffices; but nature is never found wanting in great emergencies, and accordingly, in the case of an accidental injury, the liquid pours upon the cornea in such abundance as may be requisite for its protection. It guards the eye from cold, screens it from light, assuages its sufferings from smoke or other acid vapor, and breaks the harshness of contact with a foreign body, which it dissolves, or floats away in its beneficent stream. Finally, in affections of the mind, and more especially in passions, tears pour in until they overflow. "Tears," as Metastasio tells us through Mrs. Romans—

"In tears the heart oppress'd with grief
Gives language to its woes;
In tears its fulness finds relief,
When rapture's tide o'erflows!
Who, then, unclouded bliss would seek
On this terrestrial sphere,
When e'en delight can only speak,
Like sorrow, in a tear?"

In such emergencies as we have mentioned the operation of nature is spontaneous. When the eye is wounded, she rushes, like a watchful mother, to the rescue, and without any solicitation on our part, pours bountifully out the curative waters of her fountain. But when it is the heart that is torn by great grief or sudden emotion, although she is equally on the alert to sooth and heal, there is this difference, that in the former case we are passive patients in her hands, while in the latter we are often able to exercise control, and defy at once the doctor and the disease. Persons of strong nerve can arrest the torrents of their tears, even when the big drops are trembling on their lashes, and compel the rising waters to sink and disappear. Many an eye looks cold and calm when the fountain of its hot and bitter tears is boiling beneath. Many a pale, smooth brow is raised erect, as if to look down

the misery that besets it in society, when the proud man would fain, like him of old, hide himself in his chamber to weep unseen.

But pride, being in itself unholy, can not be expected to produce good fruits; and accordingly, wherever the dread of tears prevails habitually, and in an excessive degree, we find coldness of heart instead of manliness of character, and an incapacity to extend to others that sympathy which we shrink from ourselves. Abstractedly, there is nothing more unmanly in a manifestation of sensibility by tears than by smiles. The one is no more a proof of weakness than the other; and generally speaking, the former have their origin in the higher and more refined emotions. When reading anything ridiculous, we smile openly; but when the subject awakens our better sensibilities, we either repress our tears, or hide them as something shameful or criminal. Why is this? We have heard in conversation various reasons assigned for the odium into which tears have fallen. Their hypocrisy, for instance, since so many people have the New-Zealand faculty of producing them at will; and the constitutional feebleness they betray, since women and children are the greatest weepers. But is the opposite phenomenon more rare in women and children? Is the "sapphire blaze" always a natural production? Does the silver laugh invariably come from the heart? Have we never heard that a man may "smile, and smile, and be a villain"? There are, of course, sensibilities for which weeping would be as unsuitable a manifestation as laughter; and there are likewise

"Thoughts that do often lie too deep for tears;"

but we suspect that our dread of betraying the softer emotions is a remnant of the same unreflective pride which keeps the western Indian in a state of savageism to this day.

THE MALAYS.

THE original country of the Malays is not known. The evidence is in favor of Sumatra. Both at Celebes, and Sumatra, there are prevalent traditions, which assign the period of their origin to the middle of the twelfth century. About that time, a celebrated chief of Celebes, went on an exploring and trading voyage to the westward, whence he had occasionally seen natives. In the course of the expedition, he put into a river of Sumatra, where a large number of his followers absconded in a body; and, passing into the interior, settled the region of Men-an-ká-bo. Obtaining wives from the

adjacent tribes, and possessing more civilization, they gradually formed a new race and rose to dominion. Most of them had been slaves, obtained from the Moluccas, and employed as woodcutters, and drudges to the fleet. Hence, they were called Malays, from *Malá*, to bring, and *aya*, wood. Sir Stamford Raffles affirms, that to this day, the people of Celebes look with great contempt on the Malays; and are in the habit of repeating the origin of the name. A general similarity between the Malays, and the inhabitants of the Moluccas, has been often remarked. And what is more remarkable, the Malay language is spoken more purely in the Moluccas, than on the Malay peninsula.

If this origin of the Malays be true, it accounts for the similarity which has been remarked between them, and several of the tribes of the archipelago, such as the Eidahans and Dayas of Borneo; the Sabanos, of Magindano; the Tagats and Pampangoes, of the Manillas; and the Biscayans, of the Philippines.

On the arrival of the Arabs in Sumatra, the Moslem faith rapidly supplanted paganism, and this by proselytism, not by force. Whether their language had before been reduced to writing, is not clear; but it now was written in the Arabic characters, which continue to be used. Since the introduction of European influence, the Roman alphabet is becoming prevalent, and the larger part of those who can read, do so in that character.

The new nation extended their conquests and colonies, till all Sumatra yielded them feudal homage. In the thirteenth century, they passed over to the peninsula, and took or built Malacca and Singapore. Gradually extending their dominions and colonies, the chief seat of their power was transferred to the new territory; and the chiefs of Sumatra, began to throw off their yoke. Proceeding to acquire power and numbers, they at length not only regained Sumatra, but conquered the Sunda, Philippine, and Molucca islands, with many smaller groups, and are now found in all these regions, as well as Borneo, and Luconia, and many other islands; but without any centre of unity or power, without literature, freedom, or civilization. They have sunk to insignificance, and are apparently still sinking in national character.

The Malay peninsula (called by the natives *Tanah Malayu*, "the land of the Malays") is the only great country wholly occupied by this race; and is now divided into the kingdoms of Keda, Perak, and Salengore, in the west; Johore, in the south; Pahang, Tringano, Calantan, Patini, and Ligore, in the east. There are states in the interior less known; viz., Rumbo, Johole, Jompole, Go-

minchi, Sungie-Oojong, Scrimenanti, Nanning Ulu, Calang, Jellye, Jellaboo, Segamet, Kemoung, &c. Some of these are divided into separate tribes; as for instance, Jellaboo consists of the tribes of Bodoanda, Tannah-Dottar, Muncal, and Battu-Balang. Scrimenanti embraces twelve tribes, though the population does not exceed ten thousand. Sungie-Oojong, Johole, Scrimenanti, and Rumbo, are called, "Menangkabo states." The entire population is very small; some of the states numbering no more than two thousand souls. The whole peninsula, except Rumbo and Johore, is claimed by Siam; but many of the tribes are independent, and of others, the subjection is but nominal.

Scattered over the peninsula, without specific districts and locations, are several wild tribes of whom almost nothing is known. East of Malacca are Udai, Sak-kye, and Rayat-Utan, and some negro tribes. These all go under the name of *Orang-Benua*, or country people. These have each a language or dialect, but largely tinged with Malay. Further north, on the mountains are negro tribes; but evidently distinct from the African race. Of these tribes we hope soon to know more. They seem to be a distinct variety of the human race; differing from both the African and the Papuan of New Guinea; and inferior to both. The average height of the men is about four feet eight inches. These Malay negroes are thinly spread over a considerable district, in and in the rear of Malacca, and thence northward to Meigui; amounting in the whole to but few thousands. There are at least five tribes of them—the Joo-oons, Sa-mangs, Oo-dees, Sak-ais, and Ry-ots. All of them are much below the Malays, and some scarcely above the apes; dwelling in trees, and clefts of the mountain. A few have learned a little Malay, and occasionally venture among adjacent tribes, to purchase tobacco and utensils; but of letters they know nothing. Nor have any religious observances been discovered among them. Their only weapon is the sumpit, a small hollow cane, about eight feet long, through which they blow short arrows, often poisoned at the tip.

The Malays are everywhere Mohammedans. The period of their becoming so, must be placed near the commencement of their existence as a nation on Sumatra, but it is not known with exactness. Wherever they have spread, they exhibit a vigorous spirit of proselytism; and even where force has never been attempted, they have drawn many thousand pagans to the worship of the true God. Commercial and piratical in their character and aims, they have seldom settled far from coasts and harbors; so that the language does

not prevail among the interior tribes, either on the peninsula or the islands of the Indian archipelago. Over these tribes they may claim some authority, and take precedence by superiority of civilization, but their language, manners, and government, remain unchanged.

A general character can hardly be assigned to a people scattered over so many countries, and intermingled everywhere with indigenous tribes. They have generally been set down as distinguished for villainy and treachery. This opinion has doubtless been derived from mariners; for till recently, few others knew much about them, and the piratical tribes alone have brought themselves into general notice. It can not be denied, however, that European and American captains on the coast of Sumatra, and elsewhere, have, by their frauds and oppressions, contributed not a little to drive those people to make reprisals.

Disregard of human life, revenge, idleness, and piracy, may perhaps be considered common to Malays. The universal practice of going armed, makes thoughts of murder familiar. The right of private revenge is universally admitted, even by the chiefs, and the taking of life may be atoned for by a small sum of money. Treachery has been considered the leading trait of Malay character; but probably the idea is exaggerated. Their religion teaches them, like other Mussulmans, to use treachery and violence toward infidels. But there is full reason to believe, that, in intercourse with each other, domestic and private virtues prevail to as great an extent as among other heathen. As to piracy, it is deemed not only a pure and chivalrous occupation, but religiously meritorious. It is carried on by prince, people, and priest, and is not less a matter of pride than of rapacity.

In the arts of peace, they are greatly inferior to their neighbors of Java, Japan, Cochinchina, and Siam. They have even less mechanical ingenuity and skill than the Buggis. No portion of the Malays are much civilized, and some are truly savage. The feudal system prevails everywhere, in all its integrity. The whole mass of the common people are virtually slaves. Every chief not only consumes the labor or the property of his people at pleasure, but sells the services or the persons of his vassals to any persons who will purchase them.

The Malay language is pronounced, by all who attempt it, an easy language to acquire. This is doubtless true, to a certain extent. It has no sounds difficult for Europeans or Americans to pronounce; its construction is exceedingly simple, and its words are few. There is no change made in words to express number, person, gender, mood, and time; and

the same word is often used as a noun, adjective, verb, and adverb. Even the tenses to verbs are seldom varied. Hence, so much as is necessary for common purposes is soon learned. But, whoever would speak on literary or religious subjects, finds great difficulties. The absence of grammatical inflections and particles creates great ambiguity, and makes the meaning so dependent on the juxtaposition of words, as to make great skill necessary to propriety in discoursing on any critical or novel subject. Besides this, the language is so poor in abstract terms, as to make it impossible to avoid using a host of new words. These are adopted by one from the English, by another from the Arabic, by another from the Greek, and by another from the Portuguese, according to the learning or fancy of his teacher.

THE BOSTON CUSTOMHOUSE.

This costly and imposing edifice, one of the most striking of Boston's architectural ornaments, is situated on India street, nearly opposite the foot of State street, a location more convenient than commanding. The artist has selected the head of Central wharf, as the point of view, thus giving us the east side, which however, corresponds precisely with the west or front side. It would be difficult to find words to convey an adequate idea of the effect produced by an inspection of this building, either within or without; but we give our readers the following description of the various parts.

The laying of the foundations of the new customhouse commenced in 1837. About three thousand piles were first driven, covering an area of nearly fourteen thousand feet. On these was laid a platform of granite, a foot and a half thick, and well cemented together so as to be impervious to water. On the east, south, and west margins of this platform, is built a ten-foot shield-wall, and within the enclosure thus formed, stand the walls proper of the customhouse.

The cellar story is much cut up by arches, and walls of vast thickness, required to support the immense weight of the internal stone work above. Numerous rooms, however, twelve feet high, are secured for storage, and also an apartment for the furnaces for heating the whole establishment. The first story open to the light of day is the basement. In addition to the thick wall partitions separating the rooms, two granite columns, four feet in diameter, and eight, two feet in diameter, are distributed through the rooms as supporters.

Besides two rooms for the night-inspectors, is a room ten feet by thirteen, for the engine for carrying the fans by which the heated air is to be forced up. The remainder of the rooms are for storage. They are ten and a half feet in height.

In the second story, the main feature is the grand entrance vestibule, or rotunda, fifty-eight by sixty, formed by twelve granite columns, four feet in diameter. From the north and south sides rise two grand stair-cases, fifteen feet wide at the bottom, and seven at the top, terminating in smaller vestibules above, which connect with the various offices in the third story. On the northeast side of the grand vestibule are the assistant treasurer's apartments, nineteen feet by twenty-two, sixteen by twenty-five, and ten by twelve, the latter being the vault, or Uncle Sam's strong box. On this floor are two measurers' apartments, superintendent's room, two for weighers and gaugers, two for inspectors, and one for the markers and approvers of spirits. In one of these rooms are four fourteen-foot granite columns. In most of the rooms the ceiling is arched.

In the third story, we find the great business room under the direction of the deputy-collector. It is sixty-two feet by fifty-eight, and lighted from the dome, and by six side windows opening on lighted passages. The dome is supported by twelve fluted columns of marble, twenty-nine and one half feet in height. Above them rises the dome thirty-two feet more. The lower circumference of the dome is one hundred and ninety-five feet. The circumference of the eye of the dome is fifty-six and a half feet, and it is furnished with beautifully-variegated, stained glass, which sends down a flood of mellowed light. This is said to be the most perfect and superb hall, in the Corinthian style, to be found in the United States. There are some twenty large desks in this elegant hall. On this floor are also two rooms each for the collectors, navy-officers, surveyors, and public store keepers.

In the attic is an extra room for the markers and two for the storing of papers. Throughout the building the flooring is stone. The roof and the unglazed part of the dome are also covered with tiles. The furniture in every part is new, and of the most thorough-made and substantial kind.

The material of this costly edifice is hammered Quincy granite. The architecture is the Grecian Doric, which style is preserved throughout, as far as is consistent with the site, and the business to which the building is devoted. The extreme length of the building is one hundred and forty feet, and its depth, omitting the porticoes, seventy-five feet. The height from the basement floor to

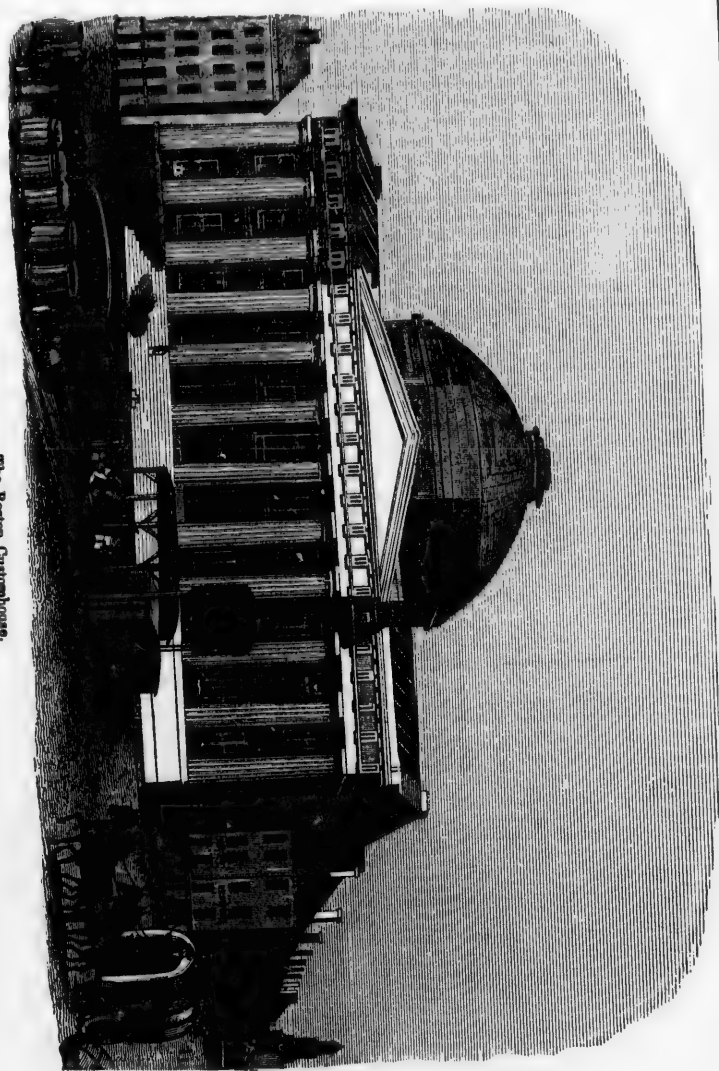
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The Boston Customhouse.



the top of the dome is ninety-five feet. Externally, thirty-two fluted columns are presented, each five feet four inches in diameter, and thirty-two feet in height. Of these, sixteen are three-quarter columns, and form part of the walls, the spaces between them being devoted to windows. There are four on each end of the building, and two on each side of the porticoes. Then at each corner is a nearly full column, so that each end of the building presents the appearance of six of these fine columns, and the sides, including the porticoes, severally exhibit twelve columns. Four ante, or square pillars, stand at the intersections of the porticoes with the body of the building. The porticoes are ten feet deep by sixty-six in width, with six columns each, of the dimensions stated above. The entablatures are ornamented with triglyph friezes and multule cornices, on a line with the cornices of the building. The porticoes are reached by eleven stone steps, on the front and sides.

Something over a million of dollars was expended on this building. Notwithstanding its immense size, such is the increase of business and population in Boston, that it is questionable whether in a few years it will not be altogether too small for the accomplishment of the amount of business which it will be desirable to transact beneath its roof.

Ammi B. Young, Esq., was employed as architect in the erection of this edifice, and we need not add that it is a noble monument to his taste and skill.

CURIOSITIES OF ART.

THE interest excited by any product of ingenuity or skill must ever be comparative. The musket of the sailor is a matter of wonder to the savage, the steam-vessel a marvel to the Chinese, and the electric telegraph a curiosity to all. Five hundred years ago our forefathers would have been as much struck as the South Sea islander with the feats of the musket; forty years ago steam-boats were subjects of wonder to our countrymen; and ten years hence we shall be as familiar with electric telegraphs as we are now with spinning-machines, gas-light, locomotives, and steam-frigates—all of which were marvels and curiosities in their day. Since invention is thus ever-active and progressive, we can regard as permanent curiosities of art only such products as exhibit vastitude or boldness of design, great ingenuity and perseverance in accomplishment, intricacy and complication of parts combined

with harmony of execution, minuteness of proportions with delicacy of finish, and simulation of living agency by inanimate mechanism.

The earliest efforts of mechanical ingenuity in Europe were chiefly directed toward the construction of clocks, watches, and automata. In all of these, weights and springs were the prime movers, and the skill of the mechanic was expended in rendering the movements of his work as numerous and complicated as possible. They had no idea of applying their art to the great manufacturing operations so characteristic of the present age; not that they were unskilful workmen, but that they were ignorant of that agency which has developed our steam-engine, spinning-mills, printing-presses, and other machinery. Steam force was to them unknown. Their sole great moving power was falling water—a power attainable only in a limited degree, and, when attainable, not often in a situation to be available. It was thus that ingenious workmen so frequently devoted a lifetime to the construction of some piece of mechanism, which, after all, was only valuable as an amusing curiosity.

SPEAKING MACHINES.

From the time that the statues of Memnon emitted their mystical tones on the banks of the Nile, and the oracular responses were delivered at Delphi, through the period when a speaking head was exhibited by the pope, toward the end of the tenth century, and others afterward by Roger Bacon and Albertus Magnus, various surprising efforts have been made to produce a machine capable of articulating human words and sentences. The record left us concerning the Egyptian statues is by far too scanty to afford basis even for a probable conjecture; and with respect to the oracle at Delphi, the cave of Trophonius, and the like, we have every reason to suppose that the sounds emitted were merely those of some confederate, rendering more surprising by calling in the aid of acoustic principles in the construction of the oracular temple. Again, the speaking instruments of the middle ages were simple combinations of pipes and stops, concealed by an external semblance of a human head, and capable of uttering only a few simple syllables.

It is but recently that ingenuity, aided by the numerous mechanical facilities of the present day, has been able to complete a machine capable of simulating the human voice in a tolerable manner. Of the three or four which have been constructed during the present century, we shall only shortly advert to that of Faber, which created considerable sensation four or five years ago. It is thus

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"You are aware that the attempts of Cagniard la Tour, Biot, Muller, and Steinle, to produce articulate sounds, or even to imitate the human voice, have not been very successful; in fact, our knowledge of the physiology of the larynx and its appendices has been so limited, that we have not even an explanation of the mode in which the falsetto is produced. Mr. Faber's instrument solves the difficulties. I can only give you a very imperfect idea of the instrument. To understand the mechanism perfectly, it would be necessary to take it to pieces, and the dissection naturally is not shown the visiter, less from a wish to conceal anything, than from the time and labor necessary for such a purpose. The machine consists of a pair of bellows, at present only worked by a pedal similar to that of an organ, of a caoutchouc imitation of the larynx, tongue, nostrils, and of a set of keys by which the springs are brought into action. The rapidity of utterance depends of course upon the rapidity with which the keys are played; and though my own attempts to make the instrument speak sounded rather ludicrous, Mr. Faber was most successful. There is no doubt that the machine may be much improved, and more especially that the *timbre* of the voice may be agreeably modified. The weather naturally affects the tension of the India-rubber; and although Mr. Faber can raise the voice or depress it, and can lay a stress upon a particular syllable or a word, still, one can not avoid feeling that there is room for improvement. This is even more evident when the instrument is made to sing; but when we remember what difficulty many people have to regulate their own choral vocales, it is not surprising that Mr. Faber has not yet succeeded in giving us an instrumental Catalani or Lablache. Faber is a native of Freybourg, in the grand duchy of Baden; he was formerly attached to the observatory at Vienna, but owing to an affection of the eyes, was obliged to retire upon a small pension: he then devoted himself to the study of anatomy, and now offers the result of his investigations, and their application to mechanics, to the world of science."

CALCULATING MACHINES.

Various machines have from time to time been invented to lessen the drudgery of long and continuous calculation. The principles upon which the increase and decrease of numbers depend, are as fixed as Nature herself; and these once known, wheel-machinery of determinate proportions may be constructed to

perform every operation in arithmetic with the utmost facility and accuracy. It is well-known that in calculations involving the powers and roots of numbers, progression, equations, logarithms, and the like, it not only requires great expertness, but accuracy—an accuracy which is scarcely attainable under the strictest human attention. Such calculations are of indispensable utility in astronomy, navigation, and geography, as well as in general mathematics; and, for application, are usually printed in tabular forms, embracing many hundred pages of thick-set figures. To complete such tables with perfect accuracy would require the life-work of several calculators; and yet, by well-arranged machinery, Mr. Babbage has demonstrated that they could be calculated and printed, free from errors, in the course of a few weeks.

The most extensive and ingenious of calculating machines are undoubtedly those invented, and so far perfected, by Mr. Babbage. That constructed at the expense of the British government for the calculation of astronomical and nautical tables, is, we believe, not yet completed, in consequence of some misunderstanding which caused a suspension of its progress in 1833. This employed one hundred and twenty figures in its calculation. At a later period, Mr. Babbage began another on his own account, intended to compute with four thousand figures! Of the former invention, Sir David Brewster, in 1832, speaks in the following terms: "Of all the machines which have been constructed in modern times, the calculating machine is doubtless the most extraordinary. Pieces of mechanism for performing particular arithmetical operations have been long ago constructed; but these bear no comparison, either in ingenuity or in magnitude, to the grand design conceived and nearly executed by Mr. Babbage. Great as the power of mechanism is known to be, yet we venture to say that many of the most intelligent of our readers will scarcely admit it to be possible, that astronomical and navigation tables can be accurately computed by machinery—that the machine can itself correct the errors which it may commit—and that the results of its calculations, when absolutely free from error, can be printed off without the aid of human hands, or the operation of human intelligence. All this, however, Mr. Babbage's machine can do; and as I have had the advantage of seeing it actually calculate, and of aiding its construction with the inventor himself, I am able to make the above statement on personal observation. The machine consists essentially of two parts—a calculating part, and a printing part, both of which are necessary to the fulfilment of Mr. Babbage's views; for the whole ad-

vantage would be lost if the computations made by the machine were copied by human hands, and transferred to types by the common process. The greater part of the calculating machinery is already constructed, and exhibits workmanship of such extraordinary skill and beauty, that nothing approaching to it has been witnessed." At a later period, we find Dr. Lardner stating that the principle on which this machine was founded was one of a perfectly general nature, and that it was therefore applicable to numerical tables of every kind, and that it was capable, not only of computing and printing, with perfect accuracy, an unlimited number of copies of every numerical table which has ever hitherto been wanted, but also that it was capable, of printing every table that can ever be required. It appears that the front elevation of the calculating machinery presents seven upright columns, each consisting of eighteen cages of wheelwork, the mechanism of each cage being identically the same, and consisting of two parts, one capable of transmitting addition from the left to the right, and the other capable of transmitting the process of carrying upward; for it seems that all calculations are by this machinery reduced to the process of addition. There will, therefore, be one hundred and thirty-six repetitions of the same train of wheelwork, each acting upon the other, and the process of addition with which the pen would be going on successively from figure to figure, will here be performed simultaneously, and as the mechanism can not err, with unfailling accuracy. The results of the calculating section are transferred by mechanical means to the printing machinery, and the types are moved by wheelwork, and brought successively into the proper position to leave their impressions on a plate of copper; this copper serving as a mould from which stereotyped plates without limit may be taken.

It has been hinted at in the above description, that various calculating machines have been invented—all, however, of inferior pretensions to that of Mr. Babbage. Thus, Louis Forchi, a Milanese cabinet-maker, constructed a machine capable of performing the simple rules of arithmetic with exactitude. This invention is of recent date: its author was awarded the gold medal of the Milan Institute for his ingenuity. In 1838, an instrument called the Surveyors' Calculator was invented by a Mr. Heald, for the purpose of avoiding the necessity of long calculations in surveying estates. This instrument, which is somewhat upon the principle of the sliding scale, can also be used in extracting the roots of numbers, and in ordinary operations of multiplication and division.

MINIATURE MACHINERY.

Much skill and perseverance have been displayed by the ingenious in all ages in the construction of miniature objects—the purposes to be gained being minuteness of proportions with delicacy of finish. Veritable watches have been set in finger-rings; a dinner-set, with all its appurtenances, placed in a hazel-nut; and a coach and four enclosed in a cherry-stone. Beyond the mere training of the hand and eye to the accomplishment of delicate work, there can be nothing gained by such exhibitions of ingenuity; and were it not for this acquirement, we might safely pronounce all these tiny inventions as the offspring of ingenious trifling.

Cicero, according to Pliny's report, saw the whole Iliad of Homer written in so fine a character that it could be contained in a nutshell; and Ælian speaks of one Myrmecides, a Milesian, and of Callicrates, a Lacedæmonian, the first of whom made an ivory chariot, so small and so delicately framed that a fly with its wings could at the same time cover it and a little ivory ship of the same dimensions; the second formed ants and other little animals out of ivory, which were so extremely small that their component parts were scarcely to be distinguished with the naked eye. He states also, in the same place, that one of those artists wrote a distich, in golden letters, which he enclosed in the rind of a grain of corn.

The tomb of Confucius, a miniature model, of Chinese workmanship, is considered as the most elaborate, costly, and beautiful specimen of oriental ingenuity ever imported into Europe. It is chiefly composed of the precious metals and japan-work, and adorned with a profusion of gems; but its chief value consists in the labor expended on its execution. Its landscapes, dragons, angels, animals, and human figures, would require several pages of description, which, after all, would, without a view of the model, prove tedious and unintelligible. The late Mr. Cox of London declared it to be one of the most extraordinary productions of art he ever beheld, and that he could not undertake to make one like it for less than £1500.

Among the many curious works of art produced by the monks and nuns of ecclesiastical establishments, none have been so much admired as their fonts, real and in model. On these were often lavished vast sums, and all the ingenuity which the sculptor, carver, or worker in metal, could command. The font of Raphael has long been known and admired; that executed by Acaula in 1562, and presented by an emperor of Germany to Philip II. of Spain, may be considered, however,

as the most elaborate of these performances. The model is contained in a case of wrought gold, and is itself of boxwood. The general design may be regarded as architectural, embellished with several compartments of sculpture or carving, consisting of various groups of figures in alto and basso relieves. These display different events in the life of Christ, from the annunciation to his crucifixion on Mount Calvary. The groups are dispersed in panels and niches on the outside, and in different recesses within. Some of the figures are less than a quarter of an inch in height; but though thus minute, are all finished with the greatest precision and skill; and what renders this execution still more curious and admirable, is the delicacy and beauty with which the back and distant figures and objects are executed. Though only twelve inches in height, and from half an inch to four inches in diameter, it is adorned with various architectural ornaments, in the richest style of Gothic, and also figures of the Virgin and child, a pelican with its young, six lions in different attitudes, several inscriptions, and thirteen compositions of basso and alto relieve. The work is said to be of unrivalled merit and beauty, and will bear the most microscopic inspection. It was offered for sale in England about thirty years ago; but we are ignorant of its after-destination.

We have seen that Arnold, the London watchmaker, constructed a watch for George III., which was set in a finger-ring; but this was nothing uncommon, for the emperor Charles V., as well as James I. of England, had similar ornaments in the jewels of their rings; and this species of mechanism is sometimes witnessed, on a large scale, in the bracelets of ladies. In Kirby's Museum, notice is taken of an exhibition at the house of one Boverick, a watchmaker in the Strand (1745), at which were shown, among other things, the following curiosities: 1st, the furniture of a dining-room, with two persons seated at dinner, and a footman in waiting—the whole capable of being enclosed in a cherry-stone; 2d, a landau in ivory, with four persons inside, two postillions, a driver, and six horses—the whole fully mounted and habited, and drawn by a flea; and 3d, a four-wheel open chaise, equally perfect, and weighing only one grain. Another London exhibitor, about the same time, constructed of ivory a tea-table, fully equipped, with urn, teapot, cups, saucers, &c., the whole being contained in a Barcelona filbert shell.

In 1828, a mechanic of Plymouth completed a miniature cannon and carriage, the whole of which only weighed the twenty-ninth part of a grain. The cannon had bore and touch-hole complete: the gun was of steel, the car-

riage of gold, and the wheels of silver. The workmanship was said to be beautiful, and could only be seen to advantage through a powerful magnifying glass. In the *Mechanics Magazine* for 1845, mention is made of a high-pressure steam-engine—the production of a watchmaker who occupies a stand at the Polytechnic Institution—so small that it stands upon a fourpenny piece, with ground to spare! "It is," says our authority, "the most curious specimen of minute workmanship ever seen, each part being made according to scale, and the whole occupying so small a space that, with the exception of the fly-wheel, it might be covered with a thimble. It is not simply a model outwardly; it works with the greatest activity by means of atmospheric pressure (in lieu of steam); and the motion of the little thing, as its parts are seen laboring and heaving under the influence, is indescribably curious and beautiful."

GIGANTIC AND CURIOUS CANNONS.

We notice a few of the remarkable field-pieces which have been constructed in various countries since the invention of gunpowder. Such instruments are often regarded with interest, either on account of their stupendous size, or the ingenuity displayed in their construction and mode of appliance. The largest known guns are, we believe, to be found in India, where they were cast during the meridian of the Mohammedan power. One of these brass pieces, known as "The Lord of the Field," now lies on the bastions of the walls of Bejapoor, and is not less than fourteen feet and nine inches long, with a bore of two feet and five inches in diameter—thus requiring a ball of two thousand six hundred and forty-six pounds! This stupendous gun was cast at Ahmednuggur, one hundred and fifty miles distant from its present situation, and must have cost no ordinary amount of labor to transport it, considering that the thickness of its metal is fully fourteen inches.

On the ramparts of Brunswick there is a curious brass mortar, said to have been cast as early as 1411. It measures ten feet in length, and nine in extreme diameter; requires for an ordinary charge fifty-two pounds of gunpowder, and is capable of throwing bombs of one thousand pounds weight! Another continental curiosity of this kind was the "Monster Mortar of Antwerp, constructed some fourteen or fifteen years ago, but since destroyed by an overcharge of powder during an experimental exhibition. This huge instrument of destruction was cast at the royal foundry at Liege, under the superintendence of Baron Evain, the Belgian mini-

ter of war. It was five feet long, and three feet and four inches in diameter, having a bore of twenty-four and a half inches, and weighing fourteen thousand and seven hundred pounds. The weight of the empty shell fitted for it was nine hundred and sixteen pounds; of the powder contained in the shell, ninety-five pounds; and of the shell, when fully charged, ten hundred and fifteen pounds. The powder-chamber was made to hold thirty pounds; but a considerable less quantity than this sufficed to discharge the shell when the range did not exceed eight hundred or nine hundred yards. The weight of the wooden bed which contained the mortar was sixteen thousand pounds. "The name of 'Monaster Mortar,'" says the *United Service Journal*, "was well selected, for it is scarcely possible to conceive a more ugly or unwieldy implement. With the exception of the mortar at Moscow, the bore of which is thirty-six inches in diameter, and which, if ever used, must have been employed for projecting masses of granite, the Antwerp mortar exceeded in magnitude any other engine of the kind hitherto known. The immense pieces called *karthauns*, which were common on the continent in the early part of the eighteenth century, rarely exceeded between seventy and eighty hundred weight, and projected a ball of not more than sixty pounds weight."

The largest gun ever made in Britain was one cast a few years ago for the pacha of Egypt. It weighs nearly eighteen tons, is made on the howitzer principle, and is about twelve feet long, with an immense quantity of metal at the breech. The diameter of the bore is about sixteen inches, and the weight of the ball with which it will be shotted four hundred and fifty-five pounds. Immense field-pieces have sometimes been constructed of malleable iron, by fashioning the body of oars, as a cooper forms a pail, and then hooping them closely round by other bars of great strength. The old piece known as "Mons Meg," and exhibited as a curiosity on the upper parapet of Edinburgh castle, is made on this principle. It is now a wreck, and was long the only piece of the kind; but some years ago the United States government gave orders for several of the same kind, of much larger dimensions. The largest of these was placed on board the "Princeton" steamer, measuring sixteen feet in length, and capable of carrying a ball weighing two hundred and thirty pounds. During one of the experimental trips with the new vessel, this monster gun was shotted, and fired, when unluckily the breech exploded, causing the death of two members of the president's cabinet, Messrs. Upshur and Gilmer, besides killing and wounding a number of others on board.

Among the curiosities under this head, we may justly notice the *steam-gun* of Mr. Perkins, invented some thirteen or fourteen years ago, and which many of our readers may have seen exhibited in both London and Edinburgh. It consists of an ordinary metal tube, of any calibre, connected with a compact steam apparatus of proportionate power, and movable at pleasure, in any direction, by means of a universal joint. With one fourth additional force to that of gunpowder, it will propel a stream of bullets, whether musket or cannon balls, at the rate of eighteen or twenty a second, for any length of time during which the steam-power may be kept up. One gun is in itself a battery in perpetual and incessant motion, moving horizontally or vertically, sweeping in a semicircular range, and pouring all the while a continued volley of balls with unerring precision when directed point-blank. Two of these guns in a ship would sink any vessel instantly; and what force could pass by such a battery on land? In the models generally exhibited, the noise made in firing is little more than that caused by the rush of a column of steam from a narrow aperture. It is curious to see a small tube of polished steel spitting (for that term is most expressive of its action) forth a shower of bullets and steam without the least apparent effort.

OPTICAL INSTRUMENTS.

To the uninitiated, a common convex or concave lens is a curiosity. Why a bit of transparent glass so fashioned should magnify or diminish the objects seen through it, is a marvel until the optical principle is explained. The same remark may, with greater justice, be applied to convex and concave mirrors; to the telescope and microscope—instruments with which every schoolboy is now less or more familiar. Common as optical instruments of every description may have become, there are still a few, the ingenuity, beauty, or magnitude of which, must strike every reflecting mind with curious interest.

Among these, we may mention the curious metallic mirrors of the Chinese, in which the figures stamped on the back are clearly reflected from the polished surface, as if the metal had been a transparent, and not a dense and opaque substance! These mirrors are generally from five to ten inches in diameter, have a knob in the centre of the back by which they can be held, and on the rest of the back are stamped certain figures and lines in relief. It is these figures which are reflected by the polished face—a fact, the explanation of which at one time greatly amused and perplexed the *savans* of Europe. One

individual ingeniously conjectures that the phenomenon may have their origin in a difference of density in different parts of the metal, occasioned by the stamping of the figures on the back, the light being reflected more or less strongly from parts that have been more or less compressed. Sir David Brewster, however, is of opinion that the spectrum in the luminous area is not an image of the figures on the back; but that the figures are a copy of the picture which the artist has drawn on the face of the mirror, and so concealed by polishing, that it is invisible in ordinary lights, and can be brought only in the sun's rays. "Let it be required, for example," says he, "to produce the dragon which is often exhibited by these curious mirrors. When the surface of the mirror is ready for polishing, the figure of the dragon may be delineated upon it in extremely shallow lines, or it may be eaten out by an acid much diluted, so as to remove the smallest possible portion of the metal. The surface must then be highly polished, not upon pitch, like glass and specula, because this would polish away the figure, but upon cloth, in the way that lenses are sometimes polished. In this way a sunk part of the shallow lines will be as highly polished as the rest, and the figure will only be visible in very strong lights, by reflecting the sun's rays from the metallic surface. When the space occupied by the figure is covered by lines or by etching, the figure will appear in shade on the wall; but if this space is left untouched, and the parts round it be covered by lines or etching, the figure will appear most luminous." Which of these surmises is the true explanation of the phenomenon, we can not determine; but either way, the construction of these curious mirrors is confined alone to the Chinese, no other people having as yet hit upon the secret of producing the deception.

Of late years, wonderful improvements have been effected on the microscope, both in the common compound achromatic and in the oxy-hydrogen. Of the former, we have now the most beautiful and perfect instruments, magnifying objects in nature many thousand times their real size, and enabling the observer to view them not only void of all false tints, but to measure and ascertain at the same time the comparative sizes of their several parts. Of the latter, some have been constructed of six and eight powers, ranged from one hundred and thirty to seventy-four million times; as, for example, the one made by Carey for the Polytechnic Institution in London. Thus, the second power of this instrument magnifies the wings of a locust to twenty-seven feet in length; the fourth power magnifies the sting of a bee to twenty-seven

feet; and by the sixth power, the human hair is magnified to eighteen inches in diameter.

As we have gigantic microscopes, so also have we gigantic telescopes; that of Earl Rosse, completed about four years ago, being as yet by far the largest ever constructed. Its completion in 1844 was thus described by Dr. Robinson the astronomer: "The speculum, which weighs three tons, and has a diameter of six feet, with a reflecting surface of four thousand and seventy-one square inches, has been ground to figure, and can be polished in a day. The tube, partly a cubic chamber, where the mirror is fixed, and partly a cylinder of inch deal, strongly hooped, and eight feet in diameter at its centre, is complete. The massive centres on which the telescope is to turn are in their place, and the iron apparatus which supports the speculum is also complete. The telescope is not to be turned to any part of the sky, but limited to a range of half an hour on each side of the meridian, through which its motion is given by powerful clockwork, independent of the observer. For this purpose it stands between two pieces of masonry of Gothic architecture, which harmonize well with the castle. One of these pillars will sustain the galleries for the observer, and the other the clockwork and other machinery. An extremely elegant arrangement of counterpoises is intended to balance the enormous mass, so that a comparatively slight force only will be required to elevate or depress it. The arrangement will not permit the examination of an object at any time, but only when near the meridian, when it is best seen. So large a telescope will always require the most favorable circumstances of air, &c., and there will always be enough of objects at any given time to employ it fully. The aperture is six feet, the focal length fifty-eight, and the reflecting surface four thousand and seventy-one square inches." Herschel's celebrated telescope had only a focal length of forty feet, and a reflecting surface of eighteen hundred and eleven inches: dimensions, the bare mention of which will enable the reader to form some conception of this new and wonderful instrument. Herschel's telescope worked wonders in the starry field; what, therefore, may we not expect from that of Earl Rosse, of more ample dimension, and of much more perfect finish? Indeed its wonderful revelations have already commenced, and nebulae which baffled the instrument of our greatest astronomer are now resolved into clusters of stars.

MANUFACTURES.

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undoubtedly one of the most ingenious departments of art, though familiarity with the process has long ago abated our wonder. There are still, however, some rare achievements in tapestry, weaving, and the like, which will ever be regarded as curiosities. Thus the weaving of certain garments without seam, even to the working of the button-holes and the stitching, is no mean feat, requiring not only considerable dexterity and skill, but a greater amount of patient labor than the generality of people would be inclined to devote. Portrait-weaving, but recently attempted in Great Britain, is also a curious and delicate process.

It has been long known that glass can be drawn into threads of extreme fineness, but it is not many years ago since it has been successfully woven with silk; a fact especially curious, as its brittle nature would appear to render such a method of manufacturing it impossible. "The fact, however," says the *London Times* of 1840, "is indisputable, the new material being substituted for gold and silver thread, than either of which it is more durable, possessing, besides, the advantage of never tarnishing. What is technically called the warp, that is, the long way of any loom-manufactured article, is composed of silk, which forms the body and ground on which the pattern in glass appears as the weft or cross-work. The requisite flexibility of glass thread for manufacturing purposes is to be ascribed to its extreme fineness, as not less than fifty or sixty of the original threads (produced by steam-power) are required to form one thread for the loom. The process is slow, as not more than a yard can be manufactured in twelve hours. The work, however, is extremely beautiful, and comparatively cheap, inasmuch as no similar stuff, where bullion is really introduced, can be purchased at anything like the price at which this is sold; added to this, it is, as far as the glass is concerned, imperishable."

Besides glass, many other materials—at one time regarded the most refractory and unlikely—have been adopted in the manufacture of textile fabrics, as well as in the fabrication of articles of economy and ornament. Thus, caoutchouc dissolved in naphtha, and spread between two layers of cloth, constitutes the waterproof fabric of Macintosh; cut into threads and ribands, it is woven into elastic ligatures and bandages; peculiarly prepared, it is employed in the formation of life-boats, as well as in the flooring of apartments; it is used in the manufacture of boots and shoes. The new substance *gutta-percha*, is already being applied to innumerable ingenious purposes. The same may be said of *papier maché*, of which many articles of do-

mestic use and ornament are now fabricated, and which is daily being adopted by the carver and cabinetmaker as a substitute for their most difficult panelling and fretwork. Leather also has recently been pressed into the same service; and so tough and durable is this material, when properly prepared and moulded, that it is likely to be very extensively adopted as a substitute for carvings in wood, castings, compositions, metal, or even *papier maché* itself. There seems, in fact, to be no limit to the economic application of every substance which comes within the reach of man. We have now before us a fair specimen of writing-paper made from the straw of the oat and barley.

Several years ago an American patented a mode of making cloth by a pneumatic process, without spinning, weaving, or any analogous machinery. The mode is as follows: Into an air-tight chamber is put a quantity of flocculent particle of wood, which, by a kind of winnowing-wheel, are kept floating equally; on one side of the chamber is a network, or gauze of metal, communicating with another chamber, from which the air can be abstracted by an exhausting syringe or air-pump; and on the communications between the chambers being opened, the air rushes with great force to supply the partial vacuum in the exhausted chamber, carrying the flocculent particles against the netting, and so interlacing the fibres that a cloth of beautiful fabric and close texture is instantaneously made. The only objection to cloth of this kind was its rawness, or liability to shrink after being wetted; and for this reason, we believe, it has never come into anything like use for clothing.

As an appropriate sequel to this, we notice another American machine, which has been recently constructed for facilitating the process of sewing and stitching. Its capabilities are thus described by a correspondent of the *Worcester Spy*: "The machine is very compact, not occupying a space of more than about six inches each way. It runs with so much ease, that I should suppose one person might easily operate twenty or thirty of them; and the work is done in a most thorough and perfect manner. Both sides of a seam look alike, appearing to be beautifully stitched, and the seam is closer and more uniform than when sewed by hand. It will sew straight or curved seams with equal facility, and so rapidly, that it takes but two minutes to sew the length of the outside seam of a pair of men's pantaloons. It sets four hundred stitches a minute with perfect ease, and the proprietor thinks there is no difficulty in setting seven hundred in a minute. The thread is less worn by this process than by hand."

sewing, and consequently retains more of its strength. The simplicity of the construction of this machine, and the accuracy, rapidity, and perfection of its operation, will place it in the same rank with the card-machine, the straw-braider, the pin-machine, and the coach lace-loom—machines which never fail to command the admiration of every intelligent beholder."

MISCELLANEOUS ECONOMIC MACHINERY.

Under this head we mean to allude to some of the more wonderful inventions which occur among the vast assemblage of machinery that is now everywhere employed to lessen the amount of human labor. A century ago, such apparatus was of a simple and scanty description; agriculture could boast of nothing like machinery; spinning and weaving were done by hand; ships were wafted by the breeze, or lay at rest when there was no breeze to waft them; printing, paper-making, and in fact almost every art, was done with primitive hand-machines; the joiner, blacksmith, and mason, toiled on with patient ingenuity, little dreaming that the time was approaching when a machine, guided by a single hand, would accomplish with ease the work of fifty. Those things which we now regard as rude and primitive, were look upon as marvels: a common damask loom, or a thrashing machine, was a curiosity worth a fifty miles' journey. Now all this is changed, and there is scarcely a single manual operation which is not less or more facilitated by mechanical aids.

In agriculture, the flail is superseded by machinery driven by horse or steam power; Sowing, planting, and raking machines, of innumerable variety, are becoming of almost universal use, doing their work with such nicety, that we might almost ascertain the number of grains necessary to the planting of a field. Ploughing has, in some instances, been executed by steam apparatus; and draining has also come under the same omnipotent sway. Even reaping, one of the nicest and most careful of all agricultural operations, has been successfully accomplished by machinery, which does all but fasten the sheaf and arrange the corn in shocks. Thus one of the homeliest of all pursuits has its curiosities of art in the thrashing mill, in the ploughing apparatus, and in the more delicate and complicated reaping machine.

In operations little removed from agriculture as regards nicety of manipulation or delicacy of finish, the potent arm of invention has also been exercising its control. An excavating machine has been perfected in the United States, capable of performing the work of twenty-five ordinary laborers, and that in all sorts of soils unincumbered with rock. Ma-

chinery now presses peat into fuel, and fashions bricks by myriads; it breaks stones for macadamising roads, and dresses their surface for pavement; it sweeps streets with a precision and rapidity which the scavenger can not equal; it saws and polishes the marble of the sculptor, and converts the most refractory granite into the most beautiful ornaments. The joiner calls in its aid to saw and plane his timber; the cartwright to finish his wheels; the cooper to build his barrels; the carpenter to fashion and finish his blocks; and the worker in metals makes the same power roll his material into sheets, square it into bars, fashion it into nails—makes it pierce holes, fasten rivets; directs it, in fine, to cut, file, polish, or stamp, with a rapidity and precision which are all but miraculous.

Again, if we turn to more delicate arts, we find its aptitude still more marvellous and universal. The sculptor and engraver perform their most delicate touches and finest tints by its aid—a few hours producing a delicacy, complexity, and regularity of lines, which the human hand can never possibly accomplish. The jeweller and goldsmith makes it perform his most delicate operations in chasing and embossing; the watchmaker calls in its power and precision to fashion the nicest parts of his machinery; and the philosophical instrument-maker forms by its aid a screw, or divides a scale in proportions, which the microscope alone can decipher. In printing, we see its triumphs in the steam-press and the composing machine; and also in the kindred apparatus for stamping, embossing, and coloring of paper, cloth, and other ornamental fabrics. The paper-mill, in which rags are cleaned, converted into pulp, reduced to paper, and that paper sized, smoothed, and cut into perfect sheets, is indeed a curiosity; and yet it is only one of a thousand such inventions. Is it in spinning?—then, here we have the numberless improvements and complications of Arkwright's invention as applied to cotton, silk, linen, or wool—these machines not only cleaning and carding the material, but drawing it out in delicacy fine as the slenderest gossamer. Allied to these are the thread, cord, and cable-making machinery scattered over our land; as well as the curious inventions for braiding and plaiting straw, working network, lace, braid, caoutchouc fabric, and the like. As in spinning, so in weaving we have a vast number of machines, which, though in every-day operation around us, must ever be regarded with curious interest. The Jacquard, damask, and carpet looms, either worked by steam or by manual labor, are, in reality, greater marvels than the automata with which our forefathers puzzled themselves, and would be so esteemed, did

not frequency and familiarity banish our wonder. To these we may add such recent inventions as the machine for the fabrication of card-web. This ingenious piece of mechanism unwinds the wire from the reel, bends it, cuts it, pierces the holes, inserts the tooth, drives it home, and lastly, gives it, when inserted, the requisite angle, with the same, or rather with greater precision and accuracy than the most skilled set of human fingers could; and with such astonishing expedition, that one machine performs a task which would require the labor of at least ten men. An engine of five hundred horse-power would drive, it is calculated, one hundred such machines.

Though wind, falling water, and animal power, may be, and are in many instances applied to the movement of such machinery as we have above alluded to, yet there can be little doubt that, without the aid of the steam-engine, many of them would have never been thought of, or at all events never brought to their present perfection. It is to this, the most powerful and most uniform of all known motive forces, that the modern world owes its astonishing advances in the arts of civilized life; to this that we still look for further and still greater advances. It is in our mines and beside our furnaces; in our factories and workshops; in our mills, bakehouses, and breweries: it is on our roads and our rivers; and on the great ocean itself, bringing, as it were, the most distant and inaccessible places into close communion and reciprocation of produce. Exerting the strength of one man, or the power of one thousand horses, with equal indifference, the steam-engine, in all its variety of form, is the most powerful auxiliary which man ever called to his aid. In all its forms, whether atmospheric, double-condensing, high-pressure or low-pressure, rotary or otherwise, it is a curiosity of art, as is the apparatus with which it is connected. Perhaps the most wonderful forms in which its power now manifests itself, are the railway locomotive, shooting along at the rate of sixty miles an hour, and in the giant iron steamer of three hundred and twenty-two feet long and fifty-one broad—a floating mass of between three and four thousand tons weight.

Had our limits permitted, we would have gladly particularized several of the curious machines to which we have merely alluded; for whether in the making of a pin, or the forging of an anchor—in the spinning of a cotton thread, or in the twisting of a cable—in the framing of a button, or in the weaving of the most costly fabric—in the fashioning of a cart-wheel, or the construction of a locomotive, the most ingenious machinery is now in requisition. Time, however, will blunt the edge of our curiosity. Locomotive en-

gines, atmospheric railways, electric telegraphs, steamships, and other present wonders, will become as familiar as spinning-wheels were to our grandmothers, or as steam-engines are to ourselves.

THE RUSSIAN EMPIRE.

It is scarcely possible that the space which the Russian empire occupies on the map of the world should not force itself upon the attention. It forms the ninth part of the habitable portion of the globe, and far exceeds in extent the empire of Rome when its dominion extended from the Euphrates to Britain. On the frontiers of China the Russian boundary-line is above three thousand miles in length, which is as long as a line drawn from the southwestern extremity of Portugal to the northeastern extremity of Europe, while from the most southern point of Greece to the shores of the Frozen ocean is not more than two thousand and four hundred miles. The distance from Riga, on the Baltic, to the haven of Peter the Paul in Kamschatka, is above eleven thousand five hundred miles, and in the Russian "Post-Book" a line of road is marked out in stages to a distance of eight thousand one hundred and thirty-four miles. A courier from St. Petersburg to Kamschatka is above a hundred days in performing the journey, and though for the latter part of it the rate of travelling is not very rapid, yet the usual rate is one hundred and sixty miles a day for the first forty days.

When, however, we begin to examine the available strength and resources of such an empire as that of Russia, we find territorial magnitude is one of the causes which least contributes to substantial national power. The population of the empire amounted, in 1836, to 61,000,000, or about one fifteenth of the human race, but it consists of many different races of people, some of whom are still in a nomade state, and wander with their flocks over the immense plains or steppes of Asiatic Russia, while others obtain a livelihood only by fishing and hunting. The plains possess the ordinary qualities of fertility which are usually found in so extensive an area, the soil in many parts being extremely rich, but in others its properties are less promising, and districts occur which offer no inducements whatever to the agriculturist. Between the river Ob and the Frozen ocean, immense marshes and swampy forest prevail. The "government" of Tobolsk, though a thousand miles in width, contains but about five hundred thousand inhabitants; and in the northeastern

extremity of the Russian empire, Captain Cochrane travelled four hundred miles without meeting a single individual, and in the course of a thousand miles he saw only one habitation. In the "government" of Archangel, which is three times as large as Great Britain, and equal in extent to the whole of the Austrian dominions, the population scarcely amounts to one for each square mile. Almost the only accommodation which the traveller finds in the inhospitable regions of Eastern Siberia, are the "charity yourtes" erected every twenty-five miles by the public authorities. They are simply uninhabited log-houses, about twelve feet square, unprovided with windows, and in which shelter only is obtained. This, however, is the least favorable picture of the Russian empire, and is true in reference only to its northern parts. Extending from thirty-eight to seventy-eight degrees, it presents every variety of climate, from that of Spain and Portugal to the rigors of the arctic circle. The provinces of the central and southern parts are thinly inhabited, though the soil and climate are highly favorable to the progress of industry and population; but in the south there is less of a national spirit than in the north, until we reach the disputed territory of Georgia and Circassia, where the authority of Russia is opposed by force of arms. The progress of converting the various people under the Russian dominion to Russian habits and ideas is however proceeding as rapidly as could be expected. In the centre and in the south, instead of the thick fogs which brood over the shores of the Frozen ocean, and a climate which drives men from agriculture to the rivers and forests for their food, we find the vegetation of the tropics and the most luxurious productions of the temperate zone. On the banks of the Don, the vine is the spontaneous produce of the soil, and attempts are at present making to cultivate the sugar-cane and the indigo plant. Between forty-nine and fifty-one degrees of latitude, in the territory occupied by the "Line of the Cossacks of Siberia," melons and the tobacco plant spring up without cultivation. On the banks of the Irtysh, the general summer diet consisted of bread, with fine melons and cucumbers, grown of course in the open air. "No part of the world," says a traveller, "can offer greater or more certain advantages to the agriculturist than the right bank of this river, where the soil is a rich black mould," and it will be recollected it is Siberia of which he speaks, a country regarded as proverbially inhospitable, which in truth it is over a great part of its surface.

Many of the finest provinces of the south of Russia were almost wholly uncultivated at

the commencement of the last century. Soon after the accession of the empress Catherine, she invited foreign colonists to settle, and ten thousand Germans, Swiss, French, and Swedes, were placed in above a hundred villages, chiefly situated between the Volga and the Don. These villages appear to be very prosperous, and are rapidly increasing in population; the births to the deaths are three to one. There are besides, elsewhere, many other colonies of foreigners, particularly of Germans; and settlers are encouraged by exemption from taxes. The land unoccupied is still of immense extent. Captain Jones, who travelled through various parts of the Russian empire in 1826, speaks of extensive districts in the neighborhood of Taganrog, on the sea of Azof, possessing an extremely rich soil, "in many parts perfect garden mould, and capable of producing any or every thing," but the population was scanty, and not sufficient for the cultivation of the land. He passed over several tracts of sixty miles of desert in this fine region.

From the preceding statements we may form some idea of the endless diversity of circumstances under which man exists in regions so varied as those comprised in the Russian empire. In one quarter the vegetation is of a tropical character. At another (Nijnei Kolimsk, on the Frozen ocean), "the inhabitants manage, with great labor, to feed a couple of cows: hay is brought eighty miles distant for them." Horses occasionally reach this place, but they never spend more than a few days here, during which they are obliged to live upon the tops and bark of bushes, or on moss. If we select any process of agriculture, we shall find a variety of means practised to attain the same object, each influenced, in a great degree, by local causes. Take the employment of animal power for instance, and while, south of Tobolsk, we find the sledges drawn by horses, north of that place only the reindeer or dogs are used. In the Crimea the two-humped camel is employed. In the neighborhood of Taganrog, the plough may be seen at work drawn by ten oxen, of the color and almost of the size of elephants. In other parts, oxen from the steppes of the Volga, the Don, and the Caucasus, are used in transporting goods, but not in tilling the land. Winter, which in some provinces is a season of inactivity and repose, is a period of life, bustle, and animation, in others. The wheels are taken off vehicles, and merchandise is transported with extraordinary ease over the frozen surface of the snow. At this season the fares by the diligences are lower than at other periods of the year. In a country of smaller extent, such striking diversities do not exist;



Crossed, the town of the Crown, Russia.

but to give any satisfactory account of all those which are most prominent in the various arts of life in Russia would occupy many separate papers.

In Russia there is scarcely anywhere to be met with that concentration of labor and extensive application of animal and mechanical power which is found in this country. In many provinces the towns are few, and the communication between them difficult. There is little or no trade, and manufactures of the simplest kind are in their infancy. But the aggregate results of the industry of above sixty millions of people are of course very large.

St. Petersburg is the principal seat of foreign commerce, as Moscow is of the vast internal trade of the empire. The former is the great maritime outlet of the gulf of Finland, and has an extensive communication with the interior by rivers and canals. Our engraving presents a view of Cronstadt, which is the great naval station of the Russian fleet in the Baltic, and is also the harbor of St. Petersburg, although thirty-one miles distant from that city. The waters of the Neva, on which St. Petersburg stands, are too shallow to admit vessels of large burden, their cargoes are therefore discharged at Cronstadt, and barges are employed in transporting them to the city. Cronstadt is built on an island about seven miles long and one broad, and the mouth of the harbor is strongly defended by a fortress built on an opposite rock. Here are extensive wet and dry docks, with store-houses and all the great establishments which are requisite in fitting out a fleet and keeping it in repair and fit for service, including foundries for cannon, ropewalks, &c. Canals are constructed which enable a ship-of-the-line to take in her stores close to the warehouses. The Military canal, capable of containing thirty-five sail-of-the-line, besides smaller vessels, has become so shallow as to be incapable of admitting large ships. Cronstadt was founded by Peter the Great. In 1703, a ship from Holland was the first merchantman that had ever appeared in the Neva, and the captain and crew were treated with great hospitality by Peter. In 1714, sixteen ships arrived; and from thirteen hundred to fifteen hundred now clear inward annually, of which one half are usually English. The navigation is open about one hundred and ninety days in the year—from the middle of May to the end of November. Cronstadt contains many good streets, which are well paved, but, with the exception of the public buildings, the houses are built of wood. The principal public edifices are the admiralty, the naval hospital, school for pilots, the exchange, customhouse, and barracks. In sum-

mer, all is life and animation, for the activity of the year is crowded into the space of a few months; but as the winter approaches, and the last ships of the season take their departure, fearful of being locked up by the ice, the scene changes, and all becomes dull. The summer population of Cronstadt amounts to about forty thousand, exclusive of soldiers, sailors, and persons employed in the dock-yards.

YOUTH AND AGE.

HUMAN life is a series of developments, and at each new period, some new power is unfolded; new experiences are likewise added; by which means not only are old prejudices frequently corrected, but the errors of our former conduct, exposed, condemned, and punished. During the earlier epochs of our existence, we are impelled by dim instincts with such impetuosity as permits small opportunity for reflection—a time, however, at length arrives when the man comes to a pause, and reverts his contemplation on the path which he has so far traversed. How much, in the haste of the transit, has been overlooked and neglected—how much injured and defaced—how many mistakes have been committed—how many wrongs inflicted and suffered! Then follows the usual exclamation—"If my time were to come over again, how differently would I have acted! But ah! it is too late now!" And so the man commences again his swift career, hurrying afresh onward, and still onward, pursued by remorse and fear, until he reaches the goal—the grave.

Meditating these facts, we are sometimes tempted to believe, that, if the prudence of age could be added to the impulse of youth, a great advantage might be gained for the individual. But a difficulty exists against blending them in one and the same person. Happy, however, is the man who benefits by the dear-bought experience of his elders; who, duly influenced by the example of those who are not only aged, but also good and wise, has learned without suffering, what to avoid, and what to pursue. The counsel of a sage mentor in a parent, grandfather, or great-uncle, can not fail of being advantageous in many important respects; but on the other hand, there are many counterbalancing disadvantages: the young are enterprising—the old prefer safety to victory, peace to anxiety. In advising youth, old persons accordingly regard rather the dangers to be escaped than the object to be attained. This, in the way of caution, may, must be well; but if it

Cronstadt, the town of the Crown, Russia.

amounts to coercion, even in the slightest degree, it can not fail to have evil consequences. If, instead of persuading or guiding the judgment, it should substitute a control upon the volition of the young, it will fatally preclude action, stopping it at its very source. We have not, in such a case, combination, but mere displacement; young impulse is altogether put aside, and antique prudence takes exclusive possession.

The caution of age should be used for the regulation, not for the annihilation, of the impulsive instincts of the ardent and juvenile. Another danger, too, arises. Antique prudence may be *obsolete*: prudence; circumstances may so have changed, as to make it the reverse of prudence at all. The world of commerce affords abundant instances of this, particularly in firms of long standing. A young man of good abilities, full of vigor, becomes for instance, by right of birth, a junior partner in an old established business, and deems his fortune made. But in a few years, the concern, to the surprise of all, sinks and perishes. The surprise is the greater, because in the world's estimation, the house was always considered particularly safe. It meddled not with modern speculation. It relied on an exceedingly old connexion, it did no business that it was not sure of—yet it failed. In fact, though it risked no losses, it achieved no gains; and thus in the end suffered more than it would have done from bad debts or mistaken speculations. Meanwhile let us imagine, or rather simply state—for we record facts—the position of the junior in the firm. What was it? Anything more distressing could scarcely be conceived. From the first he was powerless. He found an established method—a system of routine to which he was compelled to adhere. Of an enlightened understanding, and an enterprising spirit, he at first attempted innovation, and aimed at those sources of profit of which more youthful firms availed themselves; but was met so uniformly by the fixed habits and rooted prejudices of the older partners, that at length he succumbed to necessity, and fell himself, for the sake of peace, into the customary channels. Had he commenced business on his own account—thrown himself entirely on his own energies and resources, and been at once inspired by hope and controlled by prudence, he would in all probability have achieved brilliant success.

Youth is proverbially rash, but the aged may show an equally dangerous rashness in holding doggedly to old and wornout notions. Accustomed to venerate what has existed for generations without challenge, the older class of persons are prone to oppose the slightest attempt at modification, and they suffer ac-

cordingly. Many a warning, in the course of events is received; yet age is obstinate, and persists in the old course—not because it is right, but because it is old. The association of ideas, sympathy, determination of character, a sense of pride, while it recognises the peril, and other like motives, induce age to disregard the symptoms, and inspire it with courage to endure martyrdom, rather than incur the shame of a submission to change. Thus the inveterate controversialist will not confess a proven truth though convinced; falsely apprehending as a defeat what, if candidly acknowledged, would be really a triumph, he wins a ruinous conquest, and wears a counterfeit laurel. Can we take up a newspaper without being made conscious of the hideous train of disasters which have ensued in various European countries from a rash and unphilosophic persistency in what ought to have been long since modified and accommodated to the spirit of the age? The energies of France, outgrowing the routine of old dynasties, require a new electoral system; being refused, the nation indignantly dissolves the partnership between her and the sovereign. Such are the evils which flow from the substitution of the merely regulative for the dynamic forces themselves.

The last illustration presents the topic under a graver aspect than it was our intention to have considered. Thus drawn, however, to the subject, we can not refrain from remarking how often we hear that said with pride regarding institutions and systems, which, rightly regarded, should be otherwise spoken of. "Thus long has stood this system without one iota of change—here, as we stood centuries ago, do we yet stand—what was thought and professed then, is still thought and professed. Change has often been called for, but never granted; so that here, at least, we have one monument of the past that has never bent to the inconstant wind of human caprice." If such a thing really exist in the world—which is gravely to be doubted—assuredly this is a questionable boast. The minds of masses of men being liable to a continual, though it may be slow and imperceptible change, it is impossible for any institution to go on unchangingly, without falling out of relation with the world. Its vital is changed for a nominal existence; and so far from deriving strength from its antiquity, it derives weakness and danger. Institutions of this kind may be flattered up to the last day of their existence, with the external homage which they have been accustomed to receive, and ere four-and-twenty hours pass, they may be trampled on as noxious weeds, or quietly consigned to universal forgetfulness. Such catastrophes are clearly traceable to the error

of setting up persistency as the law of the world, the real law being change. Man continually changes, and everything that would wish to live with him must consent to change too; everything must partake of his eternal rejuvenescence, or take the consequences of becoming too old.

It is the instinct and tendency of youth to transcend the limits of its actual experience. It presumes, assumes, idealizes, colors from its own rich heart, the outlines and forms of things, and anticipates results with a prophetic power that sometimes induces their realization, but more frequently clothes the distant prospect with those enchantments which hope pictures as belonging to the future. Youth is the season of aerial castle-building—of countless projects—of boundless aspirations—of infinite possibilities. But a period of limitation at length arrives—of aims more and more positive, objects more definite, an arena more contracted, and labors more special. The man has become the classman from home—the cosmopolite, or the patriot—the general lover, or an attached husband and father—the acquaintance of all, or the friend of a few—the wanderer or the domestic man, whom nothing can tempt from his chimney-corner on a winter's evening. Much has been gained, but evidently much has been lost. While the difficulty of blending in one individuality, the advantages of both conditions is freely acknowledged to be great, we are far from holding it to be insuperable. There is much needless waste of wealth, much extravagance of anticipation, much borrowing on the credit of the future, and much excess of all kinds, on which it would be well that youth should be timely admonished. With all the regulations of experience, however, it is of equal importance, individually, and for social well-being, that the middle-aged and old should cultivate as far as possible youthful feelings. Let not "the glory and the freshness of the dream" of youth depart with the dream itself; some glimpses of the vision may surely survive in memory. "Once more," exclaims Byron, "who would not be a boy!" To "carry the feelings of childhood into the powers of manhood is," says Coleridge, "the prerogative of genius." And what a prerogative it is? Yet it is not one so exclusively, that all men may not share in it, each in his degree. We would warn, therefore, the man of middle age from becoming the victim of fixed habits and acquired routine, to the exclusion of new impulses, and the pleasure that constantly attends them. Every day is a new day, every hour a new hour; the world is always becoming new, and creation is renewed every moment, so that nature is still in travail with fresh generations. Noth-

ing, if we rightly consider it, is really old—not even age itself. To insist on guiding ourselves by the prejudices of yesterday, is merely to resist the progress of growth. Judgment, in its maturity, has nothing to dread from concession to increased knowledge. Its tendency is to deliberate—to move slowly—to stand still; and it indeed needs the agitation of new ideas, interests, and opinions, to preserve it in a healthy state of life and action. An old man of our acquaintance, who as solicitously sought the instruction of new impressions, as others are anxious to reject them, declared to us that, as his understanding became more and more illuminated, he felt as if he was growing younger every day; it was, moreover, evident to all that his intellect, owing to the freedom with which he had permitted it still to operate, was constantly to the last receiving fresh development and expansion. Happy the man thus united to an aged body, who yet owns a young mind! His are at once the security of discretion, and the rapture of imagination—this sobered in its tone, and that vivified—and both coexisting in beauty, like light and shade in the picture of a great master.

THE CROTON AQUEDUCT, NEW YORK.

On the 14th of October, 1842, the city of New York, held holyday—and well it might; for on that day, for the first time since its foundation, did its inhabitants enjoy the blessings of a cheap, copious, and permanent supply of pure water. Hitherto, that essential requisite to existence was obtained from pumps and drawwells; now, it flowed through the streets in the form of a fresh and sparkling river, spread out into extensive lakes, gushed forth in every square and park, and disseminated itself in living rills of health and comfort to the remotest alley. The accomplishment of such a purpose was, in truth, a triumph worthy of a civilized people—a feat more glorious and enduring than the squandering of ten times the amount of capital in gunpowder and bayonets. Those who are accustomed to sneer at the "utilitarianism of the age," may regard the watering of a city as a mere ordinary incident, a fit-enough topic for the newspapers and small-talk of a week, and nothing more; but to the individual who can take an enlarged view of human progression, and who knows how much of public health, comfort, and prosperity, depends upon a plentiful supply of pure water, it will appear in its true light as a great national achievement. In such a light was the com-

pletion of the Croton aqueduct regarded by the citizen of New York; and, viewing it through the same medium, we proceed to lay before our readers some account of this magnificent undertaking.

Like most modern cities which have rapidly increased in population and importance, New York, so early as the end of last century, began to feel the necessity of a plentiful supply of pure and wholesome water. As with most modern improvements, too, depending upon the consent of the many, there was a world of preliminary palaver and delay. In 1774, when the population amounted only to twenty-two thousand, the necessity began to be felt; in 1799, it was the subject of much talk, and even consultations with engineers; and again, in 1822, after a lapse of twenty years, a committee "sat upon" the subject, obtained a survey, drew up a report, and had the same approved of. Still, however, nothing was done; the inhabitants of New York continued to drink impregnated waters when they could obtain them; when they could not it is humorously supposed they betook themselves to "gin-sling." In 1824, the yellow fever committed fearful ravages; being all the more severe, that the inhabitants had not the indispensable element of cleanliness, to abate its effects. This roused the authorities to a keener sense of the importance of water; hence 1825, and 1826, are remarkable for the number of speeches, reports, prospectuses, &c., which the water-question gave birth to. Still there was no actual movement. In 1831, a new committee talked of "more decided steps," and besought the municipal authorities, "no longer to satisfy themselves with speeches, reports, and surveys, but actually to raise the means and strike the spade into the ground." These, it must be confessed, were bold words; but they brought no water. However, a more urgent monitor now appeared; and in 1832, the plague of the cholera ravaged the filthy and unwatered city. This so stirred the inhabitants and authorities to a sense of their danger, that the latter now set about in absolute earnest to remedy the defect. Surveys and reports were executed anew; and after a few more last words and deliberations, the work was commenced in reality. In May, 1837, the spade was struck into the ground; in July, 1842, the waters of the Croton traversed the aqueduct, and in October of the same year, were distributed throughout the city of New York, whose inhabitants hailed the event, "with unrestrained enthusiasm and joy!"

How this result was accomplished, at what cost, and with what success, we shall now endeavor to describe. The modes of supplying modern cities with water, are either by

means of Artesian wells, by pipes which conduct and distribute some distant spring, or by the engine pump applied to the water of some river, if luckily, such a source be available. The aqueduct, upon its ancient and gigantic scale, is rarely if ever resorted to, and herein consists the novelty and interest of the mode adopted by the city of New York. An aqueduct, in its primitive sense, means simply a water-leader, a familiar instance of which is afforded in the common mill-course. The water is diverted from its natural channel at the requisite height, and then led along in an artificial course to the point desired. Now this artificial channel may be simply a ditch, or it may be constructed of solid masonry; it may be open or covered; it may wind along the sides of hills, so as to preserve the proper level, or it may be carried straight forward through hills and across valleys. The ancient aqueducts of Rome were generally constructed upon the latter principle, being carried through heights by tunnels, and across valleys and rivers upon arches—the arched portion of the structure originally giving the name of aqueduct, just as the range of bridges which carry a railway across a valley is called a viaduct. The ancient principle was that adopted by New York; the Croton river is dammed up near its source, its pure and undefiled waters are conveyed in a channel of solid masonry through hills by tunnels, and over rivers and valleys by arches or embankments; and after a course of forty miles, administers to the health and comfort of four hundred thousand human beings! The reasons for adopting this species of structure are obvious; an open canal would have been liable to receive innumerable impurities from the wash of the country; a closed one not only prevents waste by evaporation, and preserves cleanliness, but adds to the strength and durability of the structure. The inequalities of the country between the source of the Croton and the city of New York, were such, as entirely to preclude the idea of a plane, or continuous water-course, and the question to be decided was—whether the laying of pipes, or the construction of an aqueduct after the plan of the ancients, would be more economical, efficient, and permanent? After due consideration it was decided in favor of the latter.

Beginning with the Croton river, its sources are principally in the county of Putnam, at a distance of fifty miles from New York. They are mostly springs, which in that elevated and uneven country, have formed many ponds and lakes, never failing in their supply. There are about twenty of these lakes which constitute the sources of the Croton river, and the aggregate of their surface areas is about

three thousand eight hundred acres. From these sources to the mouth of the Croton, at the head of Tappan bay in the Hudson, the distance is about twenty-five miles. The country bordering upon the Croton is generally elevated and uneven, not sustaining a dense population, and cleared sufficiently to prevent injury to the water from decayed vegetable matter. The river has a rapid descent, and flows over a bed of gravel and masses of broken rock. From these advantages, there is good reason to suppose that the water will receive very little impurity from the wash of the country through which it flows, and there is no doubt that the sources furnish that which is peculiarly adapted to all the purposes of a large city. The water is of such uncommon purity, that in earlier days, the Indians gave a name to the river which signified "clear water."

Again, as to the flow of water into the Croton, the capacity of the fountain reservoir, the discharge of the aqueduct, and the sufficiency of supply, we are presented with the following details: "The medium flow of water in the Croton, where the fountain reservoir is formed, exceeds fifty millions of gallons in twenty-four hours, and the minimum flow, after a long-continued drought, is about twenty-seven millions of gallons in twenty-four hours. The dam on the Croton river is about thirty-eight feet above the level, which was the surface of the natural flow of water at that place, and sets the water back about six miles, forming the fountain reservoir, which covers an area of about four hundred acres. The country forming the valley of the river was such as to give bold shores to this reservoir generally, and in cases where there was a gentle slope or a level of the ground near the surface of water, excavations were made, so that the water should not be of less depth than four and a half feet. The available capacity of this reservoir, down to the level where the water would cease to flow off in the aqueduct, has been estimated at six hundred millions of gallons. Could we suppose that the Croton river will ever, in any season of drought, fail to furnish a supply greater than would be carried off from this reservoir and the reservoirs at the city by evaporation, we have still a supply of water which would be sufficient for one million of inhabitants during the space of thirty days (estimating the amount necessary for each inhabitant to be twenty gallons for every twenty-four hours). But we may assume the number of inhabitants at present to be one third of a million, and therefore we have a sufficient store of water in this fountain reservoir to supply them for the space of ninety days, in the emergency before suppo-

sed. In addition to the quantity in the fountain reservoir, we have sufficient in the reservoirs of the city to supply one third of one million at inhabitants for about twenty-five days, at the rate of supply before mentioned. Thus we find, should such a limit as we have supposed ever happen to the supply from the river, the season of drought can not certainly be supposed to continue during the length of time (about four months) that would be required for the present population of the city to exhaust the quantity in store when all the reservoirs are full. The minimum flow of water in the river, where the dam is constructed, has been stated to be twenty-seven millions of gallons for every twenty-four hours. This would be a sufficient supply for one million of inhabitants; and should the population of the city increase to one and a half millions, this supply, together with the quantity in store, will probably be sufficient during any season of drought. There is, therefore, no fear in regard to the supply for the present, and should the time arrive when the city will require more than the present facilities afford during low stages of the river, other streams may be found which can be turned into the upper branches of the Croton, or into the aqueduct along its course. Other reservoirs may also be constructed further up the Croton, to draw from in seasons of drought."

Such are the wonderful capabilities of what may be termed the "feeders" of the Croton aqueduct, which is calculated to discharge no less than sixty millions of gallons in twenty-four hours! Some idea of this magnificent supply may be formed from the fact, that the daily consumption of the principal London water-companies (eight in number) amounts only to twenty-one millions of gallons. Of the architectural structure of the Croton aqueduct, it would be impossible to convey any clear idea without the aid of sections and diagrams. A general sketch of the undertaking may, however, be presented. As already stated, the fountain reservoir covers about four hundred acres, and is formed by a dam thirty-eight feet in height, thus creating a source one hundred and sixty-six feet higher than the city of New York. At this dam are sluices or gates for regulating the discharge of water, and of course under the superintendence of a competent manager. The interior of the aqueduct is, throughout, of an arched or elliptical form, founded upon hydraulic concrete, built of squared stones. In crossing flats slightly below the intended level, it is raised upon solid embankments; in crossing valleys or rivers, it is supported upon arches; and in passing through hills, these are tunnelled, to admit the mason-work

of the aqueduct. Roads and other thoroughfares are of course left unobstructed by the erection of bridges, just as they are when a railway is laid down. As the magnificence of aqueducts depends upon the height and number of arches requisite to carry them across valleys, it may give some idea of that under consideration, when it is stated that Harlem river is crossed by fifteen arches, seven of which are fifty feet span, and eight, of eighty feet, the greatest height being one hundred and fifty feet from the foundation to the top of the mason-work. This, it is true, is the *chef-d'œuvre* of the aqueduct, but there are other bridges and embankments of no mean magnitude, the design and construction of which do credit to American engineering. No essential change occurs in the form of the channel-way from the fountain reservoir on the Croton, to the receiving reservoir on the island of New York, a distance of thirty-eight miles, except in crossing Harlem river to reach the island, and in passing a deep valley on the island, where the iron pipes are used instead of masonry, to provide for the pressure consequent upon a depression from the regular plane. Thus the source of this artificial stream may be said to combine two principles—that of the ancient aqueduct, and a descent and ascent as in ordinary pipes. Should it ever be resolved on to remove the tubes from these depressions, and to substitute arcades to maintain the regular inclination of the channel-way, a second tier of arches will be required in crossing the Harlem river, and a bridge of great elevation to span the ravine of the island.

Having by the means now described, reached the receiving reservoir, at the rate of one and a half miles an hour, the surface-level, of the water is still one hundred and nineteen feet above the level of mean tide. From this it is conducted (a distance of two miles), to the distributing reservoir, where the surface-height falls to one hundred and fifteen feet, this last being the height to which the water can be made available in the city. The receiving reservoir covers about thirty acres, and contains one month's supply; while the distributing, which is entirely built of stone, is four hundred and thirty-six feet square, forty-five feet deep, and contains twenty millions of gallons. This last reservoir may be considered the termination of the Croton aqueduct, and is distant from the fountain reservoir forty and a half miles. The whole cost of the work was about nine millions of dollars; and adding to this the cost of pipes, and arrangements for distributing the water in the city, it will make the total cost of supplying New York city with water, twelve millions of dollars.

Commenting on the comforts and blessings of this supply of pure water, Mr. Tower remarks: "The time is not far distant, when New York will regard it as a treasure which was cheaply purchased, and will proudly point to the noble work which she has achieved, not only as an example of what art and science can accomplish. With cleanly streets, and the public parks beautified with the fountains which send forth cooling and refreshing vapors upon the air, the citizens will forget to leave the city during the warm months of summer; and the seashore, the mountain-tops, and watering-places, will fancy their beauty has faded, since they cease to be visited. But health is no less promoted by the internal than by the external use of water; and it is to be hoped, that but a short period will elapse before free baths will be provided at the public expense for the use of the poor, as well as the public generally. Daily ablution should be regarded as necessary as daily food or sleep. * * * The lime contained in the previous well-water rendered it inapplicable to the purposes of brewing, tanning, washing, bleaching, and many other processes in the arts of domestic economy: and, we believe, the calculation would not be found extravagant, if we would say, that by the use of the Croton water, over \$100,000 would be saved to the inhabitants of New York in soap and soda, and an equal amount in tea and coffee. To this may be added the superior cleanliness of the streets, the diminution of danger from fires, and the consequent reduction of the rates of insurance; the improvement of the public health, and the consequent saving in medicine and physicians' fees; the increase of working days, and the extension of the average period of working ability among the laboring classes; and lastly, the moral and intellectual advancement of the entire population, attendant upon the improvement of their physical condition; each of which is not an unimportant item in the aggregate of public prosperity and happiness. The value, however, of an abundant supply of pure water to the city of New York is not to be estimated by dollars and cents; if it were, it could be easily shown that it has not been purchased at too dear a rate, even were the expenses attending it increased to double the actual amount."

Several of the public squares of New York are already adorned with beautiful fountains, mentioned by Mr. Tower as among the blessings which would result from the completion of this aqueduct. Some of them throw the water a hundred feet perpendicularly, not after being raised by machinery, but by the force of the natural head alone.

OUR PARENTS.

RESPECT to aged parents we consider one of the greatest virtues. There is no period in life, when our fathers and mothers do not claim our attention, our love, and our warmest affection. From youth to manhood, from middle age to riper years, if our honored parents survive, it should be our constant study how we can best promote their welfare and happiness, and smooth the pillow of their declining years. Nothing better recommends an individual, than his attention to his parents. Permitting them to share in his prosperity and his honors, without burdening them with his perplexities and trials, is a mark of true affection, and will be a source of consolation through life. There are such dutiful children; men whose highest ambition seems to be the promotion of the happiness of their fathers and mothers. They watch over them with unwearied care—supply them with all their wants, and by their attention and kindness, remove all care and sorrow from their hearts. On the contrary, there are others who seem never to bestow a thought upon their parents, and to care but little whether they are comfortably situated or otherwise. By their conduct they increase their cares, embitter their lives, and bring their gray hairs with sorrow to the grave. Selfishness has steeled their hearts to the whisperings of affection, and avarice denies to their parents those favors which would materially assist them in the down-hill of life. Others too, by a course of profligacy and vice, have drained to the very dregs, their parents' cup of happiness and made them anxious for death to release them from their sufferings. Oh! how fearful must be the doom of those children who have thus embittered the lives of their parents! If there is a "world of wo," beyond the precincts of the tomb, surely they can not escape its horrors.

There can be no happier reflection than that derived from the thought of having contributed all in our power to the comfort and the happiness of our fathers and mothers. When called away from our presence, as sooner or later they may be, the thought will be sweet, that our efforts and our care smoothed their decline of life, so that they departed in comfort and peace. If it were otherwise—if we denied them what their circumstances and necessities required—and our hearts were not like the nether millstone, it must prove a thorn in our flesh to sprinkle our days with sorrow and regret.

Ye who are blest with parents, now be careful of your treatment to them. Receive mildly their reproofs, listen to their counsels, and obey them. If they are aged, and their

"days have dwindled to the shortest span," think no care too great for you to bestow upon them, no money foolishly spent that will purchase their comfort, and no time thrown away that is devoted to their happiness. Honor, respect, and love them. Spare no effort in their behalf, and do nothing that will give them pain or grieve them in the least. Do thus, and your reward will be great. Your own offspring will honor you, you will be respected wherever you are known, and gain the approbation of Heaven.

ALLSTON'S APHORISMS.

In presenting an account of the late Washington Allston, the Athenæum places before its readers the following aphorisms of which he was the author. We are told that Mr. Allston wrote them on fragments of paper, which he stuck up around his room, as aids to reflection before he began his day's work. Copied into our pages, they may be of use in lowering self-esteem in others beside painters.

1. The painter who is content with the praise of the world in respect to what does not satisfy himself, is not an artist, but an artisan; for though his reward be only praise, his pay is that of a mechanic for his time, and not for his art.

2. He that seeks popularity in art closes the door on his own genius, as he must needs paint for other minds and not for his own.

3. Reputation is but a synonyme of popularity, dependent on suffrage, to be increased or diminished at the will of the voters. It is the creature, so to speak, of its particular age, or rather of a particular state of society, and consequently, dying with that which sustained it. Hence, we can scarcely go over a page of history, that we do not, as in a churchyard, tread upon some buried reputation. But fame can not be voted down, having its immediate foundation in the essential. It is the eternal shadow of excellence, from which it can never be separated; nor is it ever made visible but in the light of an intellect kindred with that of its author. It is that light which projects the shadow which is seen of the multitude, to be wondered at and revered, even while so little comprehended, as to be often confounded with the substance—the substance being admitted from the shadow, as a matter of faith. It is the economy of Providence to provide such lights; like rising and setting stars, they follow each other through successive ages; and thus the monumental form of genius stands for ever relieved against its own imperishable shadow.

4. All excellence of every kind is but variety of truth. If we wish, then, for something beyond the true, we wish for that which is false. According to this test, how little truth is there in art! Little, indeed, but how much is that little to him who feels it!

5. Fame does not depend on the will of any man, but reputation may be given or taken away. Fame is the sympathy of kindred intellects, and sympathy is not a subject of *willing*; while reputation, having its source in the popular voice, is a sentence which may be uttered or suppressed at pleasure. Reputation, being essentially contemporaneous, is always at the mercy of the envious and the ignorant. But fame, whose very birth is posthumous, and which is only known to exist by the echo of its footsteps through congenial minds, can be neither increased nor diminished by any degree of will.

6. What light is in the natural world, such is fame in the intellectual, both requiring an atmosphere in order to become perceptible. Hence the fame of Michael Angelo is, to some minds, a nonentity; even as the sun itself would be invisible in vacuo.

7. Fame has no necessary conjunction with praise; it may exist without the breath of a word; it is a recognition of excellence which must be felt, but need not be spoken. Even the envious must feel it; feel it, and hate it in silence.

8. I can not believe that any man who deserved fame ever labored for it—that is, directly. For, as fame is but the contingent of excellence, it would be like an attempt to project a shadow before its substance was obtained. Many, however, have so fancied. "I write, I paint for fame," has often been repeated; it should have been: "I write, I paint for reputation." All anxiety, therefore, about fame should be placed to the account of reputation.

9. A man may be pretty sure that he has not attained excellence, when it is not all in all to him. Nay, I may add, that if he looks beyond it, he has not reached it. This is not the less true for being good Irish.

10. An original mind is rarely understood until it has been reflected from some half-dozen congenial with it; so averse are men to admitting the true in an unusual form; while any novelty, however fantastic, however false, is greedily swallowed. Nor is this to be wondered at; for all truth demands a response, and few people care to think, yet they must have something to supply the place of thought. Every mind would appear original, if every man had the power of projecting his own into the minds of others.

11. All effort at originality must end either in the quaint or the monstrous. For no man

knows himself as an original; he can only believe it on the report of others to whom he is made known, as he is by the projecting power before spoken of.

12. There is an essential meanness in the wish to get the better of any one. The only competition worthy a wise man is with himself.

13. Reverence is an ennobling sentiment; it is felt to be degrading only by the vulgar mind, which would escape the sense of its own littleness, by elevating itself into the antagonist to what is above it.

14. He that has no pleasure in looking up, is not fit to look down. Of such minds are the mannerists in art; in the world, tyrants of all sorts.

15. A witch's skiff can not more easily sail in the teeth of the wind, than the human eye can lie against fact; but the truth will often quiver through lips with a lie upon them.

16. It is a hard matter for a man to lie *all over*, nature having provided king's evidence in almost every member. The hand will sometimes act as a vane to show which way the wind blows, when every feature is set the other way; the knees smite together and sound the alarm of fear under a fierce countenance; the legs snake with anger when all above is calm.

17. Make no man your idol! For the best man must have faults, and his faults will usually become yours, in addition to your own. This is as true in art as in morals.

18. The devil's heartiest laugh is at a detracting witticism. Hence the phrase, "devilish good," has sometimes a literal meaning.

19. There is one thing which no man, however generously disposed, can give, but which every one, however poor, is bound to pay. This is praise. He can not give it, because it is not his own; since what is dependent for its very existence on something in another, can never become to him a possession; nor can he justly withhold it, when the presence of merit claims it as a consequence. As praise then can not be made a gift, so neither when not his due, can any man receive it; he may think he does, but he receives only words; for desert being the essential condition of praise, there can be no reality in the one without the other. This is no fanciful statement; for though praise may be withheld by the ignorant or envious, it can not be but that in the course of time, an existing merit will, on some one, produce its effects; inasmuch as the existence of any cause without its effect is an impossibility. A fearful truth lies at the bottom of this, an irreversible justice for the weal or woe of him who confirms or violates it."

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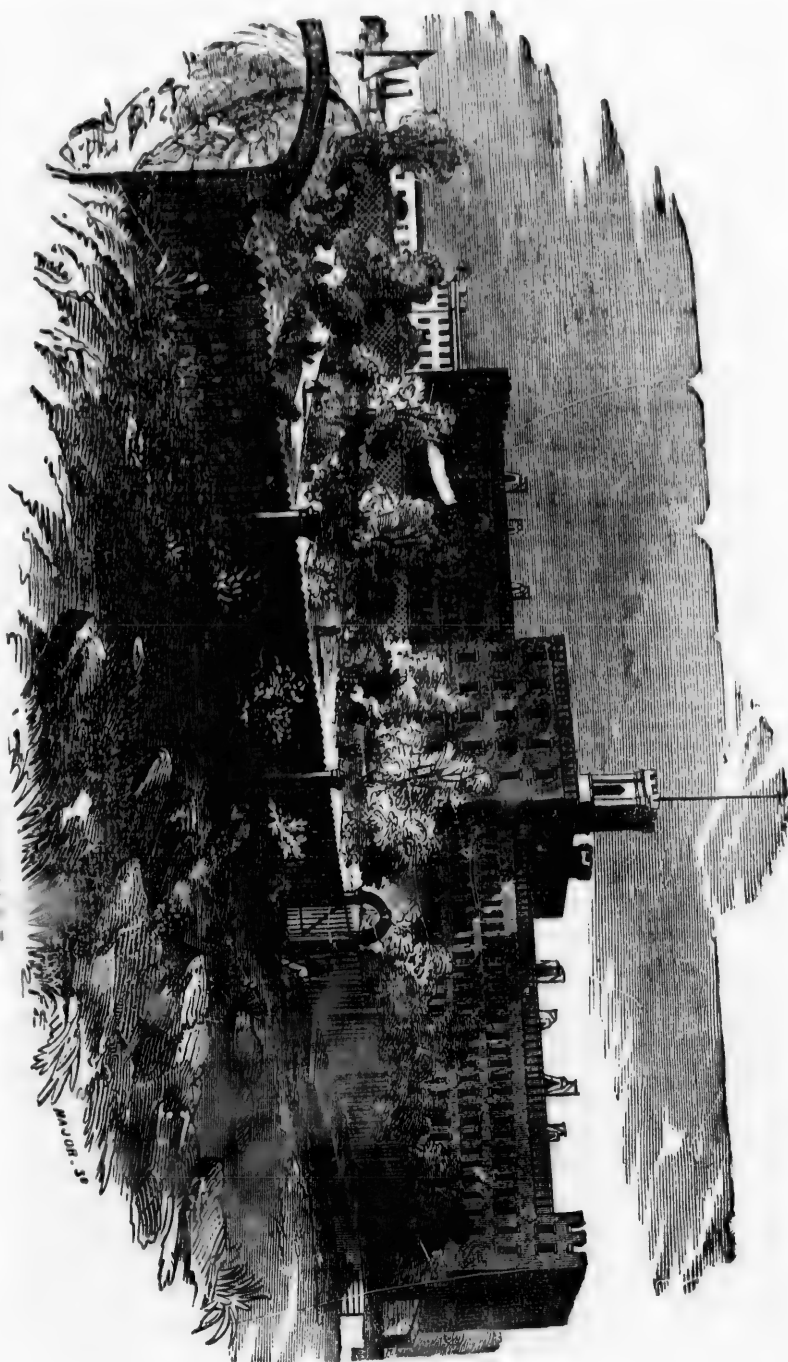
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BLAQUEWELL PENITENTIARY



CINCINNATI.

WHEN Columbus discovered the new world he was in search of a western route to Cathay, and India, whence he expected to bring back, if not treasures of gold and gems, intelligence of the wonderful land Marco Polo had described. It was not until long after the discovery of the continent of North and South America, that it was ascertained that a new region, broad as the Atlantic, lay between the ocean and the Indian sea, as the Pacific was then called. So deep-rooted was this belief that the French colonists in Canada, long after they had begun to be formidable to their English and Hollandish neighbors, in spite of many disappointments, followed the tracery of the Ohio and Mississippi in the full confidence that this mighty current could end only in the Western sea. They could not realize that nature in America had always acted on a grander scale than they were used to, and would have laughed, if told that not far above the mouth of the Ohio, was another great artery, which, by its tributaries watered one valley, the superficies of which was larger than all Europe.

They, with their limited views, were the discoverers to Europe of the *Ohio*, which, in the language of the tribe that dwelt on the bank from which the white man first beheld it, signified *Beautiful Water*. This the French translated into their own language, and by the term of *La Belle river*, it was long known in the histories of the Jesuit and Franciscan missions, which, until the land the Ohio watered, became the property of the second North American race, were its only chronicles. Not until a later day did it become known to the English colonists and then so slightly, that even in the reign of Charles II. authority was given to the English governor of Virginia, Sir William Berkley, to create an hereditary order of knighthood, with high privileges and brilliant insignia, eligibility to which depended on the aspirant having crossed the Allegany ridge, and added something to the stock of intelligence of the region beyond, the title to all of which had been conferred by royal patent on the colony at Jamestown.

Possessed of Canada, with strongly-defended positions at Fort Duquesne (Pittsburg), and Fort Chartres, near the confluence of the Ohio and Mississippi, with the even then important city of New Orleans, the wily statesmen of the reign of Louis XIV., conceived the plan of enclosing the English colonies in a network of fortifications, and ultimately of controlling the continent. So cherished was this policy that treaties made in Europe, between the crowns of France and England

never extended their influence to America, and for almost a century continued a series of contests, during which Montcalm, De Levi, Wolfe, and Braddock, distinguished themselves and died. The result is well-known, Canada became English, the northern *point d'appui* of the system was lost, and the Ohio was no longer under their control. This prologue to the beautiful engraving of Cincinnati is given, because, though Pittsburg and Louisville are important cities, Cincinnati is the undoubted queen of the river.

It was not, however, until the war of the Revolution, that serious attention was generally directed to the Ohio, for the brilliant expedition of Clarke against Kaskaskia (which is almost unknown, though in difficulty and daring it far exceeded Arnold's against Quebec) was purely military. Immediately on the termination of the war, emigrants began to hurry to the Ohio, and by one of the hardest of these, Cincinnati was commenced in 1789. By the gradual influx of population into the west Cincinnati throve, and soon became the chief city of the region.

For a long while Cincinnati was merely the *dépôt* of the Indians and fur trade, the most valuable of the products of which required to be transported across the mountains, and through forests to the seaboard. At that time Cincinnati presented a strange appearance; the houses were of logs, and here and there, through the broad streets its founders so providentially prepared, were seen the hunter, in his leathern jerkin, the Indian warrior in full paint, and the husbandman returning home from his labors. Almost from the establishment of the northwest territory, Cincinnati had been the home of the governor; and it was the residence of St. Clair, long the only delegate in congress of the whole northwest—a wilderness then, but now teeming with three millions of inhabitants, and sending to Washington thirty-four representatives.

Cincinnati was the *point de depart* of many of the expeditions against the Indians between the revolution and the war of 1812. When that war broke out it acquired new importance. Military men replaced the hunter and the Indian, and every arrival brought a reinforcement of troops. From it Taylor and Croghan marched with Gen. Harrison northward, and to it the victorious army returned from the Thames. When peace returned, a new activity was infused into Cincinnati; the vast disbursements made by the government had attracted thither many adventurers. Then commenced the era of bateau navigation, and the advent of a peculiar race of men, of whom now no trace remains. Rude boats were built and freighted with produce, which descended the river to New Orleans, where

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at was merely the fur trade, the most of which required the mountains, and hard. At that time the appearance; and here and there, the founders so proven the hunter, in the Indian warrior in full, returning home from the establishment, Cincinnati governor; and it was the only place, long the only place, whole northwest now teeming with people, and sending to representatives.

de part of many the Indians between of 1812. When the new importation of the hunter and the reindeer brought a reinforcement it Taylor and Harrison northwestern army returned peace returned, a Cincinnati; the government adventurers. Then the navigation, and the race of men, of the Indians. Rude boats with produce, which New Orleans, where

the cargo was disposed of, and the boat itself broken up and sold. The crew, after a season of dissipation, returned homeward by land, through the country inhabited by the Choctaws, and Chickasaws, and the yet wilder region infested by thieves and pirates. It was no uncommon thing for the boatmen never to return. Exposure to danger made them reckless; and they were often seen floating down the bosom of the stream, with the violin sounding merrily, but with their rifles loaded, and resting against the gunwales, ready to be used whenever any emergency arose. All the west even now rings with traditions of the daring of this race; and the traveller on the waters of the west, often has pointed out to him the scene of their bloody contests and quarrels.

The era of steam began, and this state of things passed away. The mighty discovery of Fulton created yet more activity in the west; and a current of trade, second to none on the continent, except perhaps, those of New York, and Philadelphia, sprung from it. As the states of Kentucky, and Ohio, began to fill up, the farmers and planters crowded to Cincinnati with their produce, and the character of the population changed. The day of the voyageur was gone, and lines of steamboats crowded its wharf. The peculiar character of the country around it, teeming with the sustenance for animals and grazing, made it the centre of a peculiar business which, unpoetical as it may seem, doubled every year, until in 1847, it amounted to more than the value of the cotton crop of the whole Atlantic frontier.

Other branches of industry also grew up. Shipyards lined the banks of the river, and more than one stately vessel has first floated on the bosom of the Ohio, in front of Cincinnati, been freighted at its wharves, and sailed thence to the ocean, never to return to the port of its construction.

Long before the reign of merchant-princes began, stately churches, colleges, and commodious dwellings had arisen, and replaced the hut of the early settlers, so that Cincinnati, with the exception of Philadelphia, is become the most regular and beautiful city of the Union. The scene of the accumulation of large fortunes, cultivation has followed in their train, so that it is difficult for one who first visits it from the east, to realize that he is seven hundred miles from the seaboard.

Fulton had by his discovery, overcome the difficulties of communication, and opened a market for its immense products; but yet another discovery was to contribute to its prosperity. By means of the magnetic telegraph, communication between the seaboard of the Atlantic and the lakes, is more easy than be-

tween New York and Brooklyn, and with the whole west Cincinnati has acquired new importance. It can not but continue to advance and acquire yet more influence than it now has.

OUR PILGRIM FATHERS.

THE settlement of New England forms an epoch in the history of colonization. Never, until that time, had such high principles, and such noble minds, been engaged in the great work of extending the bounds of the civilized world. Most of the founders of new states have been driven abroad by necessity; while, in others, the spirit of adventure was kindled, sometimes by restless ambition or political discontent; sometimes by enlightened views of commercial profit; but oftener by dreams of sudden wealth. But in the fathers of New England we behold a body of men who, for the liberty of faith alone, resolutely and deliberately, exchanged the delights of home and the comforts of civilized life for toil and danger, for an ungenial climate and a rugged soil. They were neither desperate adventurers nor ignorant fanatics; on the contrary, there is every evidence that they generally possessed a much higher degree of mental cultivation than was common, at that period, among the English people. Indeed, the austerity of the moral habits of their immediate descendants, and the remarkable freedom of their language from the provincial dialects of England, afford ample evidence of the general character of their ancestors. They were men

"who spake the tongue
That Shakspeare spake, the faith and morals held
That Milton held."

Nay, even if, in the pride of a vain philosophy, we should choose to suspect the praises of this portion of our English ancestry, as being but the delusions of national vanity, and to dwell more upon their faults and follies than on their virtues, still it is impossible to refuse some share of admiration to the talents and courage of these voluntary exiles, if we regard them merely as a bold and honest portion of that party, in church and state, which, to borrow the coarse but strong language of Warburton, had outfought the cavaliers, outprayed the puritans, and outwitted the parliament. The period at which they lived, is very remarkable for having been fertile in every form of irregular greatness, and they partook largely of the character of their times. In every great exertion of genius, in

that age, whether in poetry, in eloquence, in moral and theological speculation, or in active life, there was an incongruous and unaccountable mixture of the gigantic and childish—of glorious truth and miserable prejudice. Pope's criticism on the poetry of Milton may serve for a universal description of the talents of that day:—

"Milton's strong pinion now not heaven can bound;
Now, serpent-like, in puns, he sweeps the ground."

To trace the rise and progress of communities, to follow the fortunes and elucidate the characters of those who have laid broad and deep the foundations of new associations, may seem perhaps to belong to the province of history, rather than to that of a brief article of the present character. We will, however, attempt the task, and casting our eyes back for two centuries, contemplate the ancestry from which we have sprung, and the events and causes which were connected with their enterprise and achievements.

It is a difficult thing to give a correct narrative of events which happened long ago, and concerning which there is either a deficiency or a great variety of contradictory testimony. But for us the task is not so laborious or uncertain in its results. The story of our origin as a people is not obscure. We are not compelled to trace back our race through the confusion of barbarism, or to free it from the obscurity of fabulous narrative. The institutions of New England need no painful research or learned commentary; they have written and published themselves to the whole world, both by the lives and acts of those who established them and by the fruits which they have not ceased to bear since the time of their formation.

It is related in the old mythology that the Grecian goddess of wisdom sprung from the head of Jupiter completely armed and every way mature. Quite as complete did New England spring into existence. From the first she was endowed with all the attributes of society, with free institutions, with civil order, with just regard for property and protection for the rights of persons.

The day on which New England dates her origin ought never to be forgotten nor disregarded. If the Fourth of July, 1776, in the estimation of the venerated John Adams, be a day to be for ever commemorated with meetings of the people, with bonfires and all the signs of general rejoicing, so ought the 22d of December, 1620, to be held in perpetual remembrance. By our observance of those days, let us say to those who have gone before us, if perchance such communication can be held with the departed, that we have not forgotten their labors, their suffer-

ings, their dangers, or their sorrows. Yes, their children are grateful for the sacrifices they made, and the trials they endured, proud of their descent from such illustrious progenitors, and jealous of the goodly inheritance they have received. Let us keep alive in our hearts the recollections of our homes, recall the great features of past centuries, and take care that our fathers' names be not forgotten among us.

The children of New England, as such, do not arrogate to themselves any superiority over the inhabitants of any other part of the country, either as to origin, or social progress thus far accomplished. Conceding to all parts of the Union an origin as reputable and a progress as honorable as their own, they still may claim the right, as an individual family of the great community, to speak and write, concerning those firm and patient spirits who laid the foundations of law and order, of constitutional freedom and rational progress, so broad and so firm that they can sustain unmoved the weight of any superstructure which may be elevated upon them.

If we look at the origin and first settlement of New England, in what annals do we find the history of a people to be compared to this? Uninfluenced by motives of ambition, unswayed by love of conquest, they abandoned all the attractions that home and society could offer, for the sole purpose of enjoying liberty of conscience, of thinking and acting according to their own convictions, unrestrained by the control of old ecclesiastical and political institutions. Behold them setting forth on their new and dangerous enterprise! Whose cheek blanches, what eye grows dim at the perils in their way? And what dire necessity drives them forth? It is not like the poverty which urges the starving Irishman to quit his native island; not like the Pole are they fugitives from the stern requirements of a military tyranny; nor, like the blue-eyed German of our day, do they go to escape the burdens of unrequited labor; theirs is an impulse more powerful and more sacred. It is the still small voice of conscience, bidding them go forth into the wilderness to worship the God of their fathers in freedom and in peace, according to their own convictions, and in their own way.

And who compose this devoted band? Are they fiery and ignorant fanatics, or educated, and well-informed men of large experience, sagacious and wise? The early settlers of Plymouth and New Haven, numbered men distinguished for learning and personal standing. We might illustrate the assertion by referring to the characters of Winthrop, Carver, Bradford, Cotton, Brewster, Thatcher, Winslow, Hopkins, and others, whose

names are recorded on the Pilgrim Record. If we look at the whole body of the emigrants to New England, we can nowhere find names more eminent for prudence, steadfastness, honesty, and courage. If Lord Chatham could say that he had never read of a body of men superior to the Congress assembled at Philadelphia, what ought we to say of a body of men who did not venture on board ship, till they had framed a general law for the government of their future community? In what records of history do we find evidences of such solemnity of purpose, such courage, and such perseverance.

No quality of our fathers is more striking or more admirable than their love for order, their regard to the just restraints by which society is held together, property protected and the rights of all established and secured. No men ever understood better than they the real nature of republican government, or more truly put it in practice than they in their sphere and circumstances.

It should not be forgotten that when the project of the settlement of New England was first entertained, the public sentiment in England had begun to be favorable to such an enterprise. The papal power and influence had been shaken from its supremacy, and the minds of men were roused to independent action. In the place of forms and masses, the unadulterated spirit of Christianity had begun to prevail. And if the enjoyment of genuine religious freedom were not yet received even in England, still the waves of public sentiment had begun to heave and show that the day was approaching when they could no longer be restrained. When a true religious sentiment comes to control the action of a man or of a community, it takes complete and absolute possession.—Then all other motives are worthless, and all other subjects foreign. The strength of kings, the power of empires, are nothing in comparison. All earthly things in opposition to it have lost their influence, for then the soul, self-poised, cuts aloof from all worldly considerations, acts with regard only to what is divine and eternal, and holds itself responsible only to its God.

This sentiment forms the basis of the characteristic institutions of New England. But it was not solely that they might enjoy this sentiment unmolested by ecclesiastical control, that the first settlers of Plymouth sought this side of the Atlantic. That was not their only motive for leaving Holland. Not long after the reformation, the Dutch established freedom for all forms of religion, so that as far as liberty of conscience was concerned they had no cause of complaint. The church of Robinson might have remained in

Holland without suffering any restrictions. What then, were the motives which first moved the pilgrims to leave Holland with the design of establishing new institutions far away from the land of their birth, among savage tribes and on rock-bound and inhospitable shores? The religious motive was the controlling one no doubt. They left England for this cause, but joined with that, there were other causes for this new migration.

First, there was a feeling of human misery. They were strangers in a strange land, yearning for kindred associations, and with a love for their own native land in their bosoms, which no absence could subdue, and no circumstances cause them to forget. According to Gov. Bradford, there was also the motive of poverty. They desired a better and easier place of living. In Holland they saw that in a few years they must be extinguished. Moreover, as necessity was a task-matter over them, so they were forced to be such to their children and servants. And what was worse, many of their children were drawn away by the evil example of the Dutch; some becoming soldiers, and there was thus danger that after the death of the fathers, their names as Englishmen and their faith would become extinct. And last, but by no means least, they had the hope of advancing the kingdom of Christ, in these remote parts of the world. They knew that there were difficulties which must be met with courage, fortitude, and patience; but they knew too, that the ends they had in view were good, their calling lawful and urgent, and that though they should lose their lives, yet their endeavors would be honorable. Honorable indeed were the endeavors sustained by such high principles and carried out with such indomitable energy and steadiness!

Another cause was the desire of educating their children as they had been educated themselves, which in Leyden was impossible.

Yes the love of the familiar institutions and customs of one's native land, the yearning for kindred associations, that home-sickness of the heart, which even the great Roman orator could not suppress, are all observable in our ancestors. To satisfy these impulses they sought America. On these distant shores they would still be the subjects of the same king; they would be Englishmen still; their country still the same; exiles no more, but a part of the British empire. The same flag that waved over the fields of their fathers' fame would float over them, assuring them of its protection. They were proud of the nation from which they sprung. They would not suffer the ties that bound them to the spot where they were born to be entirely severed. Englishmen they would live and die, though

in a distant land, preserving both their nationality and the language of their youth. And which of us is not ready to thank them for this great gift of this noble language, which our mothers first taught us to speak? How grateful we may be that it was not lost in the jargon of Holland! Who that peruse this would not rather have first spoken its accents than, as Dr. Johnson expresses it, to have been trained to "babble French"? Who would change it for the soft voice of Italy, or the sonorous dialect of Spain? It is the language of Shakspeare and Milton; it is the language of the Pilgrims; and having sounded alarms in the cause of freedom through the tongues of Burke and Chatham, it has come to discharge the same office in the voices of Clay and Webster. It is the language of free born men, destined to spread out over hill-top and valley, nor will it cease to vibrate till liberty shall cease to have an abode upon the earth.

We might here disprove the charges sometimes brought against the Pilgrims, that they took land already partially occupied by the Indians. As a question of morals, we are not altogether clear that savages have a right to shut out from culture and improvement, a large portion of territory. The axe of the woodman rings quite as pleasantly in his ears as the warwhoop of the savage. Besides, it is well known and admitted, that the Pilgrims always were regardful of the rights of the natives. The world may be challenged to show one instance in which the first settlers disregarded the rights of the Indians. In their personal and political relations they were always on good terms with them, and it was not till more than half a century after the arrival of the May-Flower, that peace with the savages was disturbed.

After the first struggles of the Pilgrims for existence were over, we soon view them marching forward in the establishment of the new state. Having the power of making laws they entered on the business with clear conceptions of what they had to perform. They formed statistics suited to their own conditions, not based on any traditions. They evidently had a due respect for the English, but yet their reflections on the subject were entirely original. With bold defiance of custom they commenced the course of legal reform from the first. They exhibited no blind disregard of what was already in existence, while they instituted the most rigid inquiry as to how much of antiquity was suited to present exigencies. They were the pioneers of Law Reform, and in fact nearly all the important alterations made in the laws of our free states within fifty years, were directly borrowed from New England, and especially

from Connecticut. There was not a suggestion in the statement of Lord Brougham of the reforms needed in the English law which was not anticipated in the legislation of the eastern states. Imprisonment for debt was abolished there two hundred years ago. The act of the state of New York abolishing imprisonment for debt was almost exactly a transcript of the law of 1620 in Connecticut. The chief difference between the two statutes was that this primitive one was clear and explicit, while the modern was so confused and uncertain that totally different constructions were put upon it by different persons.

If we contrast the laws of New England with those of Great Britain, they will show the vast improvements made by the Pilgrims in the registration of land, the laws of marriage, dower, divorce, inheritance, and in criminal law. To the clear understanding of civil and political rights which prevailed in New England from the beginning, may be attributed the ease with which the colonies in that quarter passed into the new form of government after the revolution.

False notions have been very generally entertained with regard to the early legislation of the colony of New Haven. The "Blue Laws of Connecticut," as they are called, have become bywords of ridicule and reproach; and yet, there is nothing more solemn, nothing more grave and dignified, nothing more imposing to be found in the records of history, than the first acts of that colony. To the illustration of this point, had we the requisite room, much argument might be devoted. That colony adopted the Old Testament polity, and their chief requirements in their rulers were that they should be men fearing God, lovers of truth, hating covetousness—and if we could have such men for our candidates now, every good man in the Union would identify himself with that party.

The charge of religious intolerance is often made. The Pilgrims did not come to New England for the purpose of establishing universal toleration; they came to preserve their own faith. And what if they were misguided and over-zealous? We are not to judge them by the light of this age and this country. Besides, this theory of unlimited tolerance, which, even at the present time, finds little favor, except in this free and charitable land, did not originate in minds filled with religious ardor; the most tolerant man was not apt to be the most devout.

We condemn their conduct in the case of the Baptists and the Quakers; and desire to make out no strong defence for the Pilgrims, or to palliate persecution in any

form; and while all intelligent persons admit that the glory of having first set an example of a practical and extensive system of religious freedom, was reserved for the puritans of England, who landed on these shores; yet the first legislator who fully recognised the rights of conscience, was ROGER WILLIAMS,* a name less illustrious than it deserves to be; for, although his eccentricities of conduct and opinion may sometimes provoke a smile, he was a man of genius and of virtue, of admirable firmness, courage, and disinterestedness, and of unbounded benevolence.

The most that can be said in justification is, that the Pilgrims came especially to enjoy their own opinions, and to establish a commonwealth of their own; and, therefore, it was considered by them no injustice to pass laws to banish schism. "Besides," says the apologist, "Williams' banishment was of his own seeking, and the time was chosen by himself; and further, though his view of the matter of toleration must now be admitted to be right in the abstract, we can not justly find fault with the fathers of New England for not adopting it then.

"As to the Baptists, only one individual was punished, and that one not for heresy, but for being a scandalous person, much giv-

en to idleness and lying. The Quakers who were punished, were no more like the gentle and orderly Friends of the present day than the latter are like the Mormons.

"With regard to all these things, we should not use the eyes which have seen the improvements of two centuries, but judge from the sentiments of that time. It was easy to condemn the laws of Massachusetts against witchcraft; but had England no such laws? Why, seventy years after Blackstone spoke of witchcraft as a thing recognised everywhere, both by history and by law, and under Sir Matthew Hale, who lived to 1776, more persons were put to death in a single county of England than ever suffered in all New England together. In New England there were no executions after 1693, but in England death was inflicted for witchcraft as late as 1722."†

We might here dwell at great length on the freedom of the New England fathers from personal ambition, and truthfully set forth their conduct during the revolutions of Cromwell and 1688, as well as the part they took in our own revolution; but the limits assigned to this article will not allow us to enlarge on these instructive and profitable themes. Their deeds of patriotism and bravery will

fifty years after, attracted so much attention, when they were brought forward by Locke. His own conduct in power, was in perfect accordance with his speculative opinions; and when, in his old age, the order of his little community was disturbed by an irruption of Quaker preachers, he combated them only in pamphlets, and public disputations, and contented himself with overwhelming their doctrines with a torrent of learning, sarcasms, syllogisms, and puns.

It should also be remembered, to the honor of Roger Williams, that no one of the early colonists, without excepting William Penn himself, equalled him in justice and benevolence toward the Indians. He labored incessantly, and with success, to enlighten and conciliate them; and, by this means, acquired a personal influence among them, which he had frequently the enviable satisfaction of exerting in behalf of those who had banished him. It is not the least remarkable, or characteristic incident of his varied life, that, within one year after his exile, and while he was yet hot with controversy, and indignant at his wrongs, his first interference with the affairs of his former colony, was to protect its frontier settlements from an Indian massacre. From that time forward, though he was never permitted to return to Massachusetts, he was frequently employed by the government of that province, in negotiations with the Indians, and on other business of the highest importance. Even Cotton Mather, in spite of his steadfast abhorrence of Williams' heresy, seems to have been touched with the magnanimity and kindness of the man; and after having stigmatized him, as the "infamous Korah of New England," he confesses a little reluctantly, that, "for the forty years after his exile, he acquitted himself so laudably, that many judicious people judged him to have had the root of the matter in him, during the long winter of his retirement.

† Address of J. Prescott Hall, Esq., 1847, to which we are indebted for the substance of this article.

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* He was a native of Wales, and emigrated to New England, in 1630. He was then a young man of austere life and popular manners, full of reading, skilled in controversy, and gifted with a rapid, copious, and vehement eloquence. The writers of those days represent him as being full of turbulent and singular opinions, "and the whole country," saith the quaint Cotton Mather, "was soon like to be set on fire by the rapid motion of a windmill in the head of this one man." The heresy, which appeared most grievous to his brethren, was his zeal for unqualified religious liberty. In the warmth of his charity, he contended for "freedom of conscience, even to Papists and Arminians, with security of civil peace to all," a doctrine that filled the Massachusetts clergy with horror and alarm.

With a spirit of resolute independence, he departed, no one knew whither, accompanied by a few of his people, who, to use their own language, had gone with their beloved pastor, "to seek their providences." After some wanderings, he pitched his tent at a place, to which he gave the name of Providence, and there became the founder and legislator of the colony of Rhode Island. There he continued to rule sometimes as governor, and always as the guide and father of the settlement, for forty-eight years, employing himself in acts of kindness to his former enemies, affording relief to the distressed, and offering an asylum to the persecuted. The government of his colony was formed on his favorite principle, that in matters of faith and worship, every citizen should walk according to the light of his own conscience, without restraint or interference from the civil magistrate. During a visit, which Williams made to England, in 1643, for the purpose of procuring a colonial charter, he published a formal and labored vindication of his doctrine, under the title of "The Bloody Tenet; or, a Dialogue between Truth and Peace." In this work, written with his usual boldness and decision, he anticipated most of the arguments, which,

be preserved and transmitted to the latest generations. The descendants of the Pilgrims have spread themselves over every section of this widespread continent; the prophecy made by Mr. Webster, in a speech delivered at Plymouth twenty-seven years ago, that the sons of New England would stop only with the shores of the Pacific, has already become a portion of the history of the world.

The following beautiful lines, from the gifted pen of Mrs. SIGOURNEY, may be so appropriately introduced here, that we believe our readers will, notwithstanding the length of this article, be pleased to see them in this connexion:—

THE PILGRIM FATHERS.

How slow yon lonely vessel ploughs the main!
Amid the heavy billows now she seems
A toiling atom; then from wave to wave
Leaps madly, by the tempest lashed, or reels
Half wrecked through gulfs profound. . . Moons
wax and wane,
But still that patient traveller treads the deep.
—I see an icebound coast toward which she steers
With such a tardy movement, that it seems
Stern Winter's hand hath turned her keel to stone,
And sealed his victory on her slippery shrouds.
—They land! they land! not like the Genoese,
With glittering sword, and gaudy train, and eye
Kindling with golden fancies. Forth they come
From their long prison, hardy forms that brave
The world's unkindness, men of hoary hair,
Maidens of fearless heart, and matrons grave,
Who hush the wailing infant with a glance.
Bleak Nature's desolation wraps them round,
Eternal forests, and unyielding earth,
And savage men, who through the thickets peer
With vengeful arrow. What could lure their steps
To this drear desert? Ask of him who left
His father's home to roam through Haran's wilds,
Distrusting not the guide who called him forth,
Nor doubting, though a stranger, that his seed
Should be as ocean's sands. But yon lone bark
Hath spread her parting sail; they crowd the strand,
Those few, lone pilgrims. Can ye scan the wo
That wrings their bosoms, as the last frail link,
Binding to man and habitable earth,
Is severed? Can ye tell what pangs were there,
With keen regrets; what sickness of the heart,
What yearnings o'er their forfeit land of birth,
Their distant dear ones? Long, with straining eye,
They watch the lessening speck. Heard ye no shriek
Of anguish, when that bitter loneliness
Sank down into their bosoms? No! they turn
Back to their dreary, famished huts, and pray!
Pray, and the ills that haunt this transient life
Fade into air. Up in each girded breast
There sprang a rooted and mysterious strength,
A loftiness to face a world in arms,
To strip the pomp from sceptres, and to lay
On Duty's sacred altar the warm blood

Of slain affections, should they rise between
The soul and God. O ye, who proudly boast,
In your free veins, the blood of aires like these,
Look to their lineaments. Dread lest ye lose
Their likeness in your sons. Should Mammon cling
Too close around your heart, or wealth beget
That bloated luxury which eats the core
From manly virtue, or the tempting world
Make faint the Christian purpose in your soul,
Turn ye to Plymouth rock, and where they knelt
Kneel, and renew the vow they breathed to God.

POPULAR TASTE.

In reading the lives of eminent literary men, we are more prone to look at the influence of their works upon the public, than at the reflex influence of the public upon them. Vast as is the influence, for weal or for woe, of the productions of genius upon the multitude, there is a reflux power from the people, no less mighty; so that it may be said, every community has within its control, the character of its literary productions, and consequently, the moulding of its own moral character.

To trace the influence of popular taste upon literature, and to point out the true policy of the author, who would write for immortality, is the object of our remarks. The public, however much disdained and calumniated, in the intercourse of authors with each other, really has more of their regards, and "shapes their ends," to a greater extent than they might be willing to allow. As much as they may affect to despise it, it is the popular taste that moulds the character of their writings—makes them favorable to virtue or vice, and elaborate with the graces of rhetoric, or barren of the ornaments of style. We are far from supposing that there are no exceptions to this rule; on the contrary, there are some, who have withstood the debasing influence of the public, content with the neglect of their own age, if they might live with posterity.

Among authors, the desire of fame, or of gain, are the two great incentives to exertion. Few are the men, that have devoted themselves exclusively to literary pursuits, without one or both of these objects in view. The influence of their writings upon the morals of the community, has too often been lost sight of. Content if they could catch the applause of the multitude, the moral tendency of their works has been little regarded. Of course, whether the author desired to hear his name on the lips of thousands, or to reap a large fortune from his exertions, it was for his interest to study the tastes of the people.

Whether literature be pure or corrupt, characterized by elegance and refinement, or by a loose, careless style, depends very much upon the manners and taste of the age in which it is written. A brief glance at the history of English literature, affords abundant evidence of this position. In the reign of Queen Elizabeth, flourished "the witty, comical, and unparalleled John Lillie," as he was termed by his successors. By his "Euphuës," "Court Comedies," and other works, he introduced that false wit which characterized all the productions of that age. A rage for punning infected all ranks, and was necessary to good standing at court. The literature conformed to the practice; and the orator at the bar, the preacher in the pulpit, and the dramatist on the stage, vied with each other in hatching unnatural conceits and torturing their mother tongue. Even Shakspeare did not escape the influence of the prevailing taste, since he often descends from the majestic flights of his imagination, to the quibbling artifices of the punster. Instances of this character are still more numerous in the plays of Beaumont and Fletcher, while they abound in those inferior dramatists, who had too little originality at all to resist the predominant usage. During the reigns of James I. and his son, punning was succeeded by another species of wit; and the same tyranny was exercised over ideas, that in the former age had been exercised over words. Among the poets fostered by this age, were Ben Jonson, Donne, Cowley, and their contemporaries, distinguished as the metaphysical poets. These held their sway, till the voice of the muse was hushed in the broils of the civil war. When she awoke, after a twenty years' slumber, she was characterized by the same antiquated garb, and the same lumber of the schools. The public taste, however, had undergone a great change, under the reign of the Protector, and it was comparatively easy for Dryden to throw off the unnatural conceits of his predecessors, and introduce a new school of poetry. Fortunate had it been for English literature, if the corruption of morals under the licentious reign of Charles II. had not thrown its blight over the writings of this illustrious author, which were made a model by his contemporaries and successors. But for this, the productions of that bright constellation of worthies that adorned the age of Queen Anne, might have been free from those moral blemishes which render portions of their works exceptionable to a more refined age.

Yet Dryden, whom critics place second only to Milton and Shakspeare, bowed to the prevailing fashion, and more especially in his plays has left abundance evidences of the un-

happy influence of the popular taste. Succeeding authors yielded the same deference to the public, and it was long before literature recovered the purity of its earlier days. With the progress of society, a better taste has sprung up, and a corresponding purity in the writings of authors; till the nineteenth century has ushered in the purest age of English literature—the age of Scott and Campbell, Coleridge and Wordsworth. Even where a complete reformation has not been effected, a restraining influence has been exerted. A Byron, Moore, or Bulwer, would have written far different in the age of Charles II. Instead of the few spots that now tarnish their works, the whole would have been one mass of moral leprosy.

The literature of other nations illustrates the same truth. France, distinguished above all lands for her infidelity and debauchery, has a literature no less distinguished for the same characteristics. The brightest light in her firmament, at once a philosopher, a poet, and an historian, is still better known as the prince of infidels. Her Rousseau, and Diderot, are second only to Voltaire; while Piron, Crebillon, and the Marquis d'Argens, have blended in their writings the fairest images of fancy with the most revolting obscenity; and thus reared a monument to their infamy, while they have immortalized their genius. Unhappy France! Who can look at the long catalogue of thy illustrious dead—thy poets and philosophers—without mourning over the richest endowments of intellect prostituted—the highest gifts of God sacrilegiously offered in incense at the shrine of atheism. Fair Italy, too, the land of the lover's lute and the moonlit serenade, of bright skies and fadeless summers, affords another instance of the moulding power of popular taste. No other land could have reared a Tasso, or an Ariosto, a Petrarch or a Metastasio. Germany, the land of scholars and profound philosophers, has her characteristic metaphysical literature. The mystics and fatalists, once so prevalent there, filled the popular mind with ghostly superstition, and left their influence upon her poets and novelists. It breathes in the wild imaginings of Stolberg, the lofty conceptions of Wieland, and the gloomy splendors of Goëthe and Schiller. What is true of modern literature is equally true of the classics. That refined ear for the music of numbers, which characterized the ancient Greeks, and which caused even the smallest rhythmical mistake to be answered by the hisses of the audience, contributed not a little to the polish and elegance of their drama. With a less fastidious public for their judges, Sophocles, Euripides, and Eschylus, had not attained that perfection in their art which has made

their works the model of all succeeding ages. Thus literature, ever, to a certain extent, conforms to the popular taste.

This deference of the author to the opinions of the public, while in rare instances it may have its advantages, has generally depreciated both the intellectual and moral excellence of literature. If we look into the private history of some of the brightest names among the British poets, we shall find melancholy evidence of this truth. There is many a fearful page in the record of their lives, but none more sad than the struggle between their true interest, and a desire to gain the approbation of the public.

But this deference of authors to the public, exerted a bad influence upon the *style* of their writings. Familiarity with vice weakened the powers of their minds, and substituted a sickly effeminacy for sterling thought. Besides, when they were no longer guided by their own taste, they set up a false standard of excellence, and sought not so much to crowd their works with thought, and make them polished and ornate, as to make them popular. Of course, as the taste of the public was far less refined than their own, by seeking only to equal so mean a standard, their works went forth to the world far less perfect than they otherwise would have been. Regardless of the tribunal of posterity, which alone can give a man immortality, they sought that ephemeral popularity which passed away with their setting sun. "There is nothing," says Irving, "for which a man pays more dearly, than for his popularity while living." It was this inordinate thirst for immediate renown that committed the six thousand productions of Hans Sachs, and the teeming progeny of Lope de Vega, to an early oblivion, leaving their names as warning beacons to future authors.

Popular taste, moreover, has generally guided authors in the choice of their subjects. If works of imagination be most eagerly sought after by the reading public, authors will turn their attention to fiction and romance. It is this that has flooded modern literature with puling sentimental novels. Another incentive to this species of writing, was the speedy rise of reputation. The man who pandered to their base appetite, soon rose to favor with the public; while the philosopher and the historian toiled on, perhaps unknown while living, leaving to a wiser age to admire the monuments of their labor. While this was the case, few turned their attention to the more solid branches of literature. Hence, where we have one Bacon, or Newton, we have scores of Smollets and Fieldings, Congreves and Otways; and for one "*Novum Organum*," or *Principia*," the

language is flooded with "*Aurelias*," "*Peregrine Pickles*," "*Old Bachelors*," and "*Orphans*." Many of this class of authors, once favorites with the public, have passed away, with little else than their names surviving on the page of history. The names of Bacon and Newton, will ever be among the first to meet our gaze, as we enter the temple of knowledge, while the great mass of poets and novelists will only be found after long search in by-corners, and amid the dust and mouldering ruins of its voiceless halls. New aspirants for their fame will press them aside, and occupy their place in the public favor; so that those who seek for the poet's or novelist's fame, need not wonder if the palmy days of their reputation pass away with them to the tomb.

If the view we have taken of the subject be correct, literature will not attain its highest excellence until authors are freed from this servility to the public. They must be so far independent, as to make their own taste their guide, and to regard the decisions of posterity, rather than those of their own age. Those only, who have shaken from their minds the fetters of this slavery, have attained the most desirable fame. Milton committed his great work, the result of years of ceaseless toil, to the world, and though it fell silently from the press, unregarded by that age, he had reared in the *Paradise Lost* a fabric enduring as adamant. The waves of Time may dash around it, but it will stand for ever—a monument of the truth, that he who writes for immortality must free himself from the bondage of Popular Taste.

BIOGRAPHY OF THE HON. ROBERT CHARLES WINTHROP,

SPEAKER OF THE HOUSE OF REPRESENTATIVES.

WE have much pleasure in presenting to our readers, a portrait of the Hon. ROBERT CHARLES WINTHROP, speaker of the house of representatives of the present (thirtieth) Congress; and the following interesting biographical sketch, condensed principally from an able article in the *American Review*.

This gentleman, whose preferment to the high official station which he now holds is a well-deserved and appropriate tribute to his personal worth and public service, has won a not less eminent place in the esteem of the whig party of the Union, by the fidelity with which he has devoted his talents, throughout an active political career, to the advancement of the good of the country.

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Robt. C. Winthrop.
Speaker.

REPRESENTATIVE FROM MASS.

Mr. Winthrop's participation in the public counsels is attended by a fortunate prestige of name and lineage. In both of these he may be said to be identified with the history of that portion of the country which he represents; and if there be any truth in the ancient notion that an honorable ancestry constitutes a pledge to patriotism and virtue, he has an especial reason to acknowledge its obligations, and to find in them an incentive to the faithful and zealous performance of every public duty. He has descended through a long line of highly respectable ancestors, and stands in the sixth degree of lineal descent from that worthy and justly celebrated character JOHN WINTHROP, the first governor of Massachusetts, whose biography we have already presented to our readers.

Robert C. Winthrop was the youngest son of Thomas L. Winthrop, the late lieutenant-governor of Massachusetts; and was born in Boston on the 12th of May, 1809, and was educated at Harvard; where, in 1828, he received his diploma, and with it, one of the three highest honors awarded to his class. He studied law under the direction of Daniel Webster, and was admitted to the bar of Boston in 1831. He devoted but little attention to the practice of his profession, the bent of his mind inclining him much more to the study of public affairs than to the labors of a vocation which few men pursue but under the spur of a necessity, which, in the present instance did not exist.

Mr. Winthrop entered into public life in 1834, being then elected to the legislature of Massachusetts, and has since continued in the public service. He was the representative of Boston in the state legislature for six years, during the last three of which, he was the speaker of the popular branch of that body; discharging the arduous duties of this post with an address and judgment which elicited the most honorable confidence and approbation from the body over which he presided.

The house of representatives of Massachusetts at that time numbered between five and six hundred members. We may suppose the duties of the speaker in such a body to exact the highest degree of parliamentary skill and tact in their administration. In this school the incumbent found full and adequate experience; and he left it after his three years' service, with the reputation of an expert and effective proficient in the rules of legislative proceedings.

Mr. Winthrop first became favorably known beyond the limits of his own state, when, in 1837, he visited the city of New York, at the head of the Massachusetts delegation, which assembled there with the delegations from the Whigs from many other states, to

celebrate the great triumph of the whigs of New York, in the elections then recently held. It was a great meeting of congratulation, and intended to concert measures for the co-operation of the whig party in the presidential canvass which was soon to open. It was a brilliant prelude to the election of 1840, of which the results were at once so glorious and so disastrous.

On that occasion, no one drew more observation in the large crowd there assembled, than the subject of this memoir. His speech in the Masonic hall, where the congratulations of the occasions were proffered and received, is still remembered by those who were present, as one of the most felicitous and attractive incidents of that memorable exhibition. His vivid and animated eloquence stimulated the already excited feeling of the assembly to the highest key of exultation, and old and young left the scene of this event with common prediction of future eminence to the orator, and more extended renown among his countrymen.

His congressional career began in 1840. The resignation in that year, of the representative from Boston, Mr. Abbott Lawrence, led to the choice of Mr. Winthrop, by a majority so decisive as almost to deprive the election of its title to be called a contest. He thus took his seat in the house of representatives at the second session of the twenty-sixth Congress. He was a member also of the distinguished twenty-seventh Congress, where, among many worthy, he maintained a position with the best. A personal and private affliction compelled him to resign his seat in the summer of 1842, his place being supplied by the Hon. Nathan Appleton, who relinquished it at the close of that session, to enable his friend to resume his former seat at the commencement of the following winter; which the latter did after an election almost without opposition. Mr. Winthrop has continued ever since to represent the city of Boston, by a suffrage equally honorable to him and to the constituency whose confidence he has so signally won.

His seven years' service in the national counsels have brought him very prominently before the nation. One of the most accomplished debaters in the house of representatives, he has participated, to some extent, in the discussion of all the great questions which have been presented to that body, during his connexion with it. Habitually abstaining from an obtrusive presentation of his opinions, he has never failed to say a right word at the right season; he has, therefore, always spoken effectively, and in such a manner as to win the esteem and confidence of the house. A steadfast whig, his position has ever been

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conservative, strong in the advocacy of the national institutions, careful to guard against encroachments on the constitution, jealous of the ambition of party leaders, and prompt to denounce the excesses into which partisan zeal has often threatened to plunge the policy of the state. Looking with an enlightened view to the capabilities of the country, and justly estimating the elements of national strength and happiness embraced within the Union as it is, he has always contributed his aid to promote their development through the appropriate action of the constitution, and by the wise policy of protection and encourage-ment.

In the attempts of the administration and its supporters to embroil the country in a war upon the Oregon question, he was the friend of conciliatory adjustment and peace, and had the gratification to find the labors of his compeers and himself in that instance successful.

We may take the occasion to observe here that, in the prosecution of this object, he was the first to propose in Congress a mode of settling the question, which, highly equitable and honorable in itself, was seconded by the approbation of the most judicious persons both at home and abroad. The following resolutions, moved by Mr. Winthrop on the 19th of December, 1845, contain the earliest suggestion of an arbitration by eminent civilians. This resort was afterward formally proposed by the British government, and if it had not been most unwisely—we must think—refused by the administration, would have established a happy precedent for the settlement of international differences, and have placed the peace of the world, so far as the example of two of the most powerful nations might tend to establish it, upon the foundation of calm counsel and right reason, instead of leaving it at the mercy of tempestuous passion and the bitter supremacy of the sword.

The resolutions referred to are in these words:—

"Resolved, That the differences between the United States and Great Britain, on the subject of the Oregon Territory, are still a fit subject for negotiation and compromise, and that satisfactory evidence has not yet been afforded that no compromise which the United States ought to accept can be effected.

"Resolved, That it would be a dishonor to the age in which we live, and in the highest degree discreditable to both the nations concerned, if they should suffer themselves to be drawn into a war, upon a question of no immediate or practical interest to either of them.

"Resolved, That if no other mode for the amicable adjustment of this question remains, it is due to the principles of civilization and Christianity that a resort to arbitration should be had; and that this government can not relieve itself from all responsibility which may follow the failure to settle the controversy, while this resort is still untried.

"Resolved, That arbitration does not necessarily involve a reference to crowned heads; and that, if a jealousy of such a reference is entertained in any quarter, a commission of able and dispassionate citizens, either from the two countries concerned or from the world at large, offers itself as an obvious and unobjectionable alternative."

In the more recent extravagances of those in power, who have committed the nation to all the responsibilities of the odious Mexican war, he has acted with the most enlightened whigs to give it a direction as favorable to humanity and justice as the phrensy of the administration will allow. Utterly opposed to the grounds upon which this war has been waged, and condemning the usurpation of authority, by which the president commenced it, he nevertheless, did not scruple to vote with the great body of the whigs in Congress, the first supplies of men and money, which seemed to be indispensable to the reinforcement of General Taylor at that moment of supposed exigency, of which the administration took such artful advantage. He has been consistently, ever since, an earnest advocate for peace on terms compatible with the honor and justice of a magnanimous and Christian people.

The same moderation of opinion which appears in this speech, in regard to the great and exciting subjects there referred to, is consistently preserved by Mr. Winthrop upon other topics which have agitated the public. A sincere friend of the constitution, and earnestly desirous to maintain the harmony of the Union, he has conscientiously, we may say, refrained from those ultra views on the subject of slavery, in either the northern or southern aspect of the question, which have so unhappily and so unprofitably distracted some sections of the country. Liberal and tolerant upon that subject, he has firmly maintained his own opinion against those on either side, who we may hope will acknowledge, in their calmer reflections, the wisdom and justice of his moderation.

The recent election of this gentleman to the honorable post he now fills in the house of representatives, is an expressive token of the good opinion he has won on that theatre where his talents have been most profitably exerted for the benefit of the country. No member of that house might better deserve this distinction. His integrity as a man, his accomplishments as a statesman, and his fidelity as a whig, render the choice of the house an honor to both the giver and receiver; while his parliamentary skill in the appropriate functions of his office enable him to requite the favor he has received, by the usefulness of his service.

The address he made to the house, on the

occasion of taking the chair, exhibits a just appreciation of the duties committed to him, and affords an example of graceful dignity of style which may be commended to the imitation of his successors. It is worthy of being preserved, and we therefore submit it to the judgment of our readers:—

"Gentlemen of the House of Representatives of the United States:—"

"I am deeply sensible of the honor which you have conferred upon me by the vote which has just been announced, and I pray leave to express my most grateful acknowledgments to those who have thought me worthy of so distinguished a mark of their confidence.

"When I remember by whom this chair has been filled in other years, and, still more, when I reflect on the constitutional character of the body before me, I can not but feel that you have assigned me a position worthy of any man's ambition, and far above the rightful reach of my own.

"I approach the discharge of its duties with a profound impression at once of their dignity and of their difficulty.

"Seven years of service as a member of this branch of the National Legislature have more than sufficed to teach me that this is no place of mere formal routine or ceremonious repose. Severe labors, perplexing cares, trying responsibilities, await any one who is called to it, even under the most auspicious and favorable circumstances. How, then, can I help trembling at the task which you have imposed on me, in the existing condition of this house and of the country?

"In a time of war, in a time of high political excitement, in a time of momentous national controversy, I see before me the representatives of the people almost equally divided, not merely, as the votes of this morning have already indicated, in their preference for persons, but in opinion and in principle, on many of the most important questions on which they have assembled to deliberate.

"May I not reasonably claim, in advance, from you all, something more than an ordinary measure of forbearance and indulgence, for whatever of inability I may manifest, in meeting the exigencies and embarrassments which I can not hope to escape? And may I not reasonably implore, with something more than common fervency, upon your labors and upon my own, the blessing of that Almighty power, whose recorded attribute it is, that 'He maketh men to be of one mind in a house'?

"Let us enter, gentlemen, upon our work of legislation with a solemn sense of our responsibility to God and to our country. However we may be divided on questions of immediate policy, we are united by the closest ties of permanent interest and permanent obligation. We are the representatives of twenty millions of people, bound together by common laws and a common liberty. A common flag floats daily over us, on which there is not one of who would see a stain rest, and from which there is not one of us who would see a star struck. And we have a common constitution, to which the oaths of allegiance, which it will be my first duty to administer to you, will be only, I am persuaded, the formal expression of those sentiments of devotion which are already cherished in all our hearts.

"There may be differences of opinion as to the powers which this constitution confers upon us; but the purposes for which it was created are inscribed upon its face in language which can not be misconstrued. It was ordained and established 'to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defence, promote

the general welfare, and secure the blessings of liberty to ourselves and our posterity.'

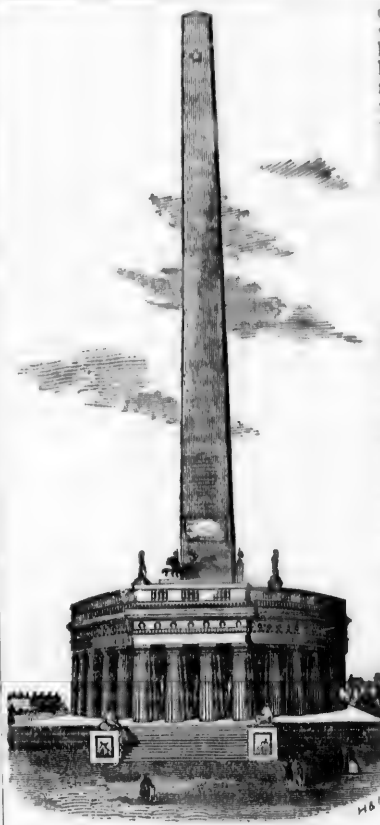
"Union, justice, domestic tranquillity, the common defence, the general welfare, and the security of liberty for us and for those who shall come after us, are thus the great objects for which we are to exercise whatever powers have been intrusted to us. And I hazard nothing in saying that there have been few periods in our national history, when the eyes of the whole people have been turned more intently and more anxiously toward the capitol, than they are at this moment, to see what is to be done, here and now, for the vindication and promotion of these lofty ends.

"Let us resolve, then, that those eyes shall at least witness on our part duties discharged with diligence, deliberations conducted with dignity, and efforts honestly and earnestly made for the peace, prosperity, and honor of the Republic.

"I shall esteem it the highest privilege of my public life if I shall be permitted to contribute anything to these results by a faithful and impartial administration of the office which I have now accepted."

Mr. Winthrop's talents are of the highest order; well and ably has he improved the important advantages afforded him. Modest and retiring in his habits, kind and courteous in his manners, easy of access, strong and enduring in his friendships—a man peculiarly amiable in all the amenities of private life. To do a kindness to another, without the knowledge of the world, constitutes his greatest happiness. No selfish or restricted principle is suffered to lurk in his heart. He is a man without guile or deceit, and a faithful and able adviser. Possessed naturally of a strong understanding, he seldom fails forming a correct judgment on every important question, and in cases of difficulty his advice and opinion are invaluable, and to the benefit of his counsels his friends are always welcome. The speaker is forty years of age. He may be presumed to have a lengthened career of great public usefulness before him. As a general principle, it will always hold true, that men who throw aside the consideration of selfish aggrandisement, who put away the blandishments of pleasure in their youth—who dedicate themselves from the first dawn of manhood to their country, and the cause of political and religious freedom—whose virtues render their lives one scene of solicitude and anxiety for others' happiness, will sooner or later enjoy the confidence and love of all whose good opinion is to be appreciated. Indeed, disguise it as we may, there can be no real happiness enjoyed, or public usefulness promoted, unless we adopt and pursue those objects calculated to enlarge the mind, meliorate the disposition, and promote the best interests of mankind.

We conclude this brief and imperfect sketch with the sincere expression of the hope, that his constituents may long enjoy his services, and open the way for him to yet higher distinction.



WASHINGTON NATIONAL MONUMENT.

On the seventy-second anniversary of American independence, the introductory movement was made in an enterprise, the record of which, when successfully carried through to completion, will form a bright page in the history of our country. On that day, assembled thousands at Washington city, many of them deputations from distant sections of the Union, witnessed or participated in the august and impressive ceremonies attending the laying of the corner-stone of a national monument to the memory of GEORGE WASHINGTON and his compatriots in the Revolution. Although nearly half a century has elapsed since the death of Washington, the enthusiasm with which this magnificent design has been

entered into, is proof, if any indeed were wanting, that his memory is still green in the hearts of his countrymen. We fervently hope that the noble undertaking will be urged forward, until the topmost stone is placed upon its cloud-capped summit, and the monument stands forth a transcendent and enduring memorial of a nation's gratitude to him who was emphatically "the founder of an empire, the marvel of the world!"—

"Who burst the fetters of the land,
And bade us to be free;
Who raised the dignity of man,
And bade a Nation be."

The most prominent and imposing part of the proposed monument will be seen to be the obelisk shaft, rising from the centre to the height of six hundred feet, seventy feet square at the base and forty at the top. Around this shaft, elevated on a terrace or platform, twenty feet high and three hundred feet square, is to be erected a vast rotunda, supported by thirty massive columns, of twelve feet diameter, and forty-five feet high; enclosing a gallery fifty feet wide, sixty feet high, and five hundred feet in circumference. Above the colonnade will be an entablature twenty feet high, surmounted by a balustrade, fifteen feet high, making an elevation of one hundred feet for the rotunda or colonnaded building. On the top over the great gallery, and enclosed by the balustrade, will be a grand terrace around the great shaft, seven hundred feet in circumference, and outside the balustrade a walk or gallery, six feet wide and seven hundred and fifty in circumference. The entrance and passage to the grand terrace will be by means of a railway of easy ascent encircling the great shaft. If the above plan and dimensions are carried out, this noble structure will be nearly three times as high as the monument on Bunker's hill. Within the rotunda it is designed to place niches for the reception of statues of the signers of the Declaration of Independence.

The corner-stone, presented by a citizen of Baltimore, is a massive block of granite, weighing about twenty-five thousand pounds.

The site of the monument was granted by Congress. It is on the banks of the Potomac, near the location of the Smithsonian institution, west of the capitol, and about midway between it and the president's house.

A committee having been appointed to make the necessary arrangements, stands were built for those engaged in the ceremonies, and also for spectators. Triumphal arches were erected, on one of which was placed a live eagle, forty years old, which had hailed the advent of General Lafayette

to Alexandria, and which has since been presented to M. Vattermare, to be deposited, upon his return to France, in the National museum of Paris. The weather was singularly propitious. A fine rain had fallen the previous day, which had cooled the air and laid the dust, and the Beneficent Deity seemed to smile auspiciously upon the interesting and imposing ceremonies of the day. The procession, which was decidedly the most splendid ever witnessed in Washington, was about an hour in reaching the site of the monument, where everything was in readiness to lay the stone, which forms the commencement of a structure, which, it is hoped, will endure till time shall be no more. The scene presented, after the procession had reached the ground, was magnificent. It afforded one of the finest subjects for the pencil that an artist could desire. The whole plain was covered with human beings. The vast sloping amphitheatre of seats exhibited an unbroken sheet of human countenances, expressing a deep interest in the imposing ceremonies, while over the whole the banner of the Union, spread and displayed by the willing breeze, seemed proudly to extend its ornament and protection. There were present delegations of the Cherokee, Chickasaw, Choctaw, Creek and Sawbridge Indians, who brought with them silver medals, struck in 1786, representing Washington in the act of shaking hands with the red man, and under whose administration their forefathers made some of the earliest treaties of peace. To these Indians were assigned seats on the platform near the orator, to whom they listened with profound attention, as did the immense assembly he addressed. During the advance of the procession the bells of the city continued to toll solemnly. The ceremonies commenced with an appropriate prayer to the Throne of Grace, by the grand chaplain of the grand lodge of Maryland, the Rev. Mr. M'JILTON, which was succeeded by a psalm, to the tune of "Old Hundred," sung by the assembled multitude, with due solemnity and feeling. The Hon. R. C. WINTHROP, orator of the day, then arose and delivered an address, which was received with universal and merited applause. When Mr. WINTHROP had concluded, Mr. B. B. FRENCH, grand master of the grand lodge of the district of Columbia, delivered an appropriate address, after which he descended from the platform on which he had stood to the corner-stone, and proceeded to deposite the articles selected to be placed in the cavity, and to perform the usual appropriate Masonic ceremonies of laying it. A patriotic song was then sung by Mr. Eddy, and the benediction pronounced; and thus terminated these interesting and

solemn ceremonies. The procession now returned to the Pennsylvania avenue, where the military part of it was reviewed by the president of the United States, and afterward dismissed.

The interest felt by all in this patriotic undertaking had been so intense, that it was found difficult to preserve the marble chips, taken from the cavity of the corner-stone. They were seized upon with the utmost eagerness, by visitors, and borne away to be preserved as mementoes of the event. The board of managers ordered square pieces of the stone to be wrought, labelled, and presented to the several state delegations, to be deposited in the library or museum of each state and territory. They bore the following inscription: "To the state of —: this piece of the corner-stone of the Washington National Monument, laid July 4, 1848, is presented by the Board of Managers."

In the earlier arrangements for the ceremonies attending the laying of the corner-stone, the late venerable JOHN QUINCY ADAMS was invited to deliver the address. His eminent ability, and intimate acquaintance with our national history, from its earliest days, and withal having possessed the personal friendship of Washington—being thus a connecting link between the present and the generations that have passed away—rendered it peculiarly appropriate that he should perform that service. But the increasing physical infirmities of the "old man eloquent,"—and which, alas, so soon closed his long career of usefulness on earth—compelled him to decline. The Hon. ROBERT C. WINTHROP was then solicited to discharge that duty. He complied, and the able manner in which he performed the service speaks highly for the judgment exercised in his selection. For purity of sentiment, graceful expression, and as an eminent tribute to the lofty and self-sacrificing character of the *Pater Patrie*, we do not believe this oration has ever been surpassed. We present our readers with it entire, in full confidence, that they will be gratified to possess this eloquent production, for perusal not only, but for preservation also among the choice literary gems that adorn their libraries. May its existence be coeval with that of the monument, the initiatory step in the erection of which, called it forth—that while the one, to the latest posterity, will speak impressively and symbolically to all who are permitted to look upon its majestic proportions, coming generations to the remotest bounds of this widespread Union, may read in the other of, and be incited to emulate, the exalted virtues of him who was "first in war, first in peace, and first in the hearts of his countrymen."

ORATION

FROUNOUNCED BY THE

HONORABLE ROBERT C. WINTHROP.

FELLOW-CITIZENS OF THE UNITED STATES:

We are assembled to take the first step toward the fulfilment of a long-deferred obligation. In this eight-and-fortieth year since his death, we have come together to lay the corner-stone of a national monument to WASHINGTON.

Other monuments to this illustrious person have long ago been erected. By not a few of the great states of our Union, by not a few of the great cities of our states, the chiselled statue or the lofty column has been set up in his honor. The highest art of the old world—of France, of Italy, and of England, successively—has been put in requisition for the purpose. Houdon for Virginia, Canova for North Carolina, Sir Francis Chantrey for Massachusetts, have severally signalized their genius by portraying and perpetuating the form and features of the Father of his country.

Nor has the Congress of the nation altogether failed of its duty in this respect. The massive and majestic figure which presides over the precincts of the capitol, and which seems altogether in the acts of challenging a new vow of allegiance to the constitution and the Union from every one who approaches it, is a visible testimony—and one not the less grateful to an American eye, as being the masterly production of a native artist—that the government of the country has not been unmindful of what it owes to WASHINGTON.

One tribute to his memory is left to be rendered. One monument remains to be reared. A monument which shall bespeak the gratitude, not of states, or of cities, or of governments; not of separate communities, or of official bodies; but of the people, the whole people of the nation:—a national monument, erected by the citizens of the United States of America.

Of such a monument we have come to lay the corner-stone here and now. On this day, on this spot, in this presence, and at this precise epoch in the history of our country and of the world, we are about to commence this crowning work of commemoration.

The day, the place, the witnesses, the period in the world's history and in our own history—all, all are most appropriate to the occasion.

The day is appropriate. On this 4th day of July—emphatically the people's day—we come most fitly to acknowledge the people's debt to their first and greatest benefactor.

WASHINGTON, indeed, had no immediate

* Horatio Greenough.

connexion with the immortal act of the 4th of July, 1776. His signature did not attest the Declaration of Independence. But the sword by which that independence was to be achieved, was already at his side, and already had he struck the blow which rendered that declaration inevitable.

"*Hostibus primo fugatis, Bostonium recuperatum,*" is the inscription on the medal which commemorates Washington's earliest triumph. And when the British forces were compelled to evacuate Boston, on the 17th day of March, 1776, bloodless though the victory was, the question was irrevocably settled, that independence, and not the mere redress of grievances, was to be the momentous stake of our colonial struggle.

Without the event of the 4th of July, it is true, Washington would have found no adequate opening for that full career of military and civil glory which has rendered him illustrious for ever. But it is equally true, that, without Washington, this day could never have acquired that renown in the history of human liberty, which now, above all other days, it enjoys. We may not say that the man made the day, or the day the man; but we may say that, by the blessing of God, they were made for each other, and both for the highest and most enduring good of America and of the world.

The place is appropriate. We are on the banks of his own beloved and beautiful Potomac. On one side of us, within a few hours' sail, are the hallowed scenes amid which Washington spent all of his mature life, which was not devoted to the public service of the country, and where still repose, in their original resting-place, all that remained of him when life was over. On the other side, and within our more immediate view, is the capitol of the republic, standing on the site selected by himself, and within whose walls the rights which he vindicated, the principles which he established, the institutions which he founded, have been, and are still to be, maintained, developed, and advanced.

The witnesses are appropriate, and such as eminently befit the occasion.

The president of the United States is here; and feels, I am persuaded, that the official distinction which he lends to the scene has no higher personal charm, if any higher public dignity, than that which it derives from its associations with his earliest and most illustrious predecessor. "I hold the place which Washington held," must be a reflection capable of sustaining a chief magistrate under any and every weight of responsibility and care, and of elevating him to the pursuit of the purest and loftiest ends.

Representatives of foreign nations are here; ready to bear witness to the priceless example which America has given to the world, in the character of him, whose fame has long since ceased to be the property of any country or of any age.

The vice-president and senate; the heads of departments; the judiciary; the authorities of the city and district; the officers of the army, and navy, and marines, from many a field and many a flood of earlier and of later fame; veterans of-the-line and volunteers, fresh from the scenes of trial and of triumph, with swords already wreathed with myrtles, which every patriot prays may prove as unfading as the laurels with which their brows are bound: all are here, eager to attest their reverence for the memory of one, whom statesmen and soldiers have conspired in pronouncing to have been first alike in peace and in war.

The representatives of the people are here; and it is only as their organ that I have felt it incumbent on me, in the midst of cares and duties which would have formed an ample apology for declining any other service, to say a few words on this occasion. Coming here in no official capacity, I yet feel that I bring with me the sanction, not merely of the representatives of the people, but of the people themselves, for all that I can say, and for much more than I can say, in honor of Washington.

And, indeed, the people themselves are here; in masses such as never before were seen within the shadows of the capitol—a cloud of witnesses—to bring their own heartfelt testimony to this occasion. From all the states of the Union; from all political parties; from all professions and occupations; men of all sorts and conditions, and those before whom men of all sorts and conditions bow, as lending the chief ornament and grace to every scene of life; the people—as individual citizens, and in every variety of association, military and masonic, moral, collegiate, and charitable, Rechabites and Red Men, sons of temperance and firemen, united brothers and odd-fellows—the people have come up this day to the temple-gates of a common and glorious republic, to fraternize with each other in a fresh act of homage to the memory of the man, who was, and is, and will for ever be, “first in the hearts of his countrymen!” Welcome, welcome, Americans all! “The name of American, which belongs to you and your national capacity,” I borrow the words of Washington himself, “must always exalt the just pride of patriotism more than any appellation derived from local discriminations.”

Nor can I feel, fellow-citizens, that I have yet made mention of all who are with us at

this hour. Which of us does not realize that unseen witnesses are around us? Think ye, that the little band, whose feeble forms are spared to bless our sight once more, are all of the army of Washington, who are uniting with us in this tribute of reverence for his memory? Think ye, that the patriot soldiers or the patriot statesmen, who stood around him in war and in peace, are altogether absent from a scene like this? Adams and Jefferson, joint authors of the declaration, by whose lives and deaths this day has been doubly hallowed; Hamilton and Madison, joint framers of the constitution, present, visibly present, in the venerated persons of those nearest and dearest to them in life; Marshall, under whose auspices the work before us was projected, and whose classic pen had already constructed a monument to his illustrious compeer and friend more durable than marble or granite; Knox, Lincoln, and Green; Franklin, Jay, Pickering, and Morris; Schuyler and Putnam, Stark and Prescott, Sumter and Marion, Steuben, Kosciusko, and Lafayette; companions, counsellors, supporters, friends, followers of Washington, all, all: we hail them from their orbs on high, and feel that we do them no wrong in counting them among the gratified witnesses of this occasion!

But it is the precise epoch at which we have arrived in the world's history, and in our own history, which imparts to this occasion an interest and an importance which can not easily be over-estimated.

I can make but the merest allusion to the mighty movements which have recently taken place on the continent of Europe—where events which would have given character to an age, have been crowded within the changes of a moon.

Interesting, intensely interesting, as these events have been to all who have witnessed them, they have been tenfold more interesting to Americans. We see in them the influence of our own institutions. We behold in them the results of our own example. We recognise them as the spontaneous germination and growth of seeds which have been wafted over the ocean, for half a century past, from our own original liberty-tree.

The distinguished writer of the declaration which made this day memorable, was full of apprehensions as to the influence of the Old World upon the New. He even wished, on one occasion, that “an ocean of fire” might roll between America and Europe, to cut off and consume those serpent fascinations and seductions which were to corrupt, if not to strangle outright, our infant freedom in its cradle.

Doubtless, these were no idle fears at the time. Doubtless, there are dangers still,

which might almost seem to have justified such a wish. But it is plain that the currents of political influence thus far have run deepest and strongest in the opposite direction. *The influence of the new world upon the old* is the great moral of the events of the day.

Mr. Jefferson's "ocean of fire" has, indeed, been almost realized. A tremendous enginery has covered the sea with smoke and flame. The fiery dragon has ceased to be a fable. The inspired description of Leviathan is fulfilled to the letter: "Out of his mouth go burning lamps, and sparks of fire leap out. Out of his nostrils goeth smoke, as out of a seething pot or caldron. His breath kindleth coals, and a flame goeth out of his mouth. He maketh the deep to boil like a pot; he maketh the sea like a pot of ointment."

But the Saint George of modern civilization and science, instead of slaying the dragon, has subdued him to the yoke, and broken him in to the service of mankind. The ocean of fire has only facilitated the intercourse which it was invoked to destroy. And the result is before the world.

New modes of communication, regular and more rapid interchanges of information and opinion, freer and more frequent comparisons of principles, of institutions, and of conditions, have at length brought the political systems of the two continents into conflict; and prostrate thrones and reeling empires this day bear witness to the shock!

Yes, fellow-citizens (if we be allowed the figure), the great upward and downward trains on the track of human freedom have at last come into collision! It is too early as yet for any one to pronounce upon the precise consequences of the encounter. But we can see at a glance what engines have been shattered, and what engines have been dashed from their seats. We can see, too, that the great American built locomotive "Liberty" still holds on its course, unimpeded and unimpaired; gathering strength as it goes; developing new energies to meet new exigencies; and bearing along its imperial train of twenty millions of people with a speed which knows no parallel.

Nor can we fail to observe that men are everywhere beginning to examine the model of this mighty engine, and that not a few have already begun to copy its construction and to imitate its machinery. The great doctrines of our own revolution, that "all men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness; that to secure these rights governments are instituted among men, deriving their just powers from the consent of the governed; that whenever any form of government

becomes destructive of these ends it is the right of the people to alter or abolish it and to institute a new government, laying its foundation on such principles and organizing its powers in such form as to them shall seem most likely to effect their safety and happiness;" these fundamental maxims of the rights of man are proclaimed as emphatically this day in Paris, as they were seventy-two years ago this day in Philadelphia.

And not in Paris alone. The whole civilized world resounds with American opinions and American principles. Every vale is vocal with them. Every mountain has found a tongue for them.

"Sonitum toto Germania celo
Audiit, et insolitis tremuerunt motibus Alpes."

Everywhere the people are heard calling their rulers to account and holding them to a just responsibility. Everywhere the cry is raised for the elective franchise, the trial by jury, the freedom of the press, written constitutions, representative systems, republican forms.

In some cases, most fortunately, the rulers themselves have not escaped some seasonable symptoms of the pervading fervor for freedom, and have nobly anticipated the demands of their subjects. To the sovereign pontiff of the Roman states in particular, belongs the honor of having led the way in the great movement of the day, and no American will withhold from him a cordial tribute of respect and admiration for whatever he has done or designed for the regeneration of Italy. Glorious, indeed, on the page of history will be the name of Pius IX., if the rise of another Rome shall be traced to his wise and liberal policy. Yet not less truly glorious, if his own authority should date its decline to his noble refusal to lend his apostolical sanction to a war of conquest.

For Italy, however, and for France, and for the whole European world alike, a great work still remains. A rational, practical, enduring liberty can not be acquired in a paroxysm, can not be established by a proclamation. It is not—our own history proves that it is not—

"The hasty product of the day,
But the well-ripened fruit of wise delay."

The redress of a few crying grievances, the reform of a few glaring abuses, the banishment of a minister, the burning of a throne, the overthrow of a dynasty, these are but scanty preparations for the mighty undertaking upon which they have entered. New systems are to be constructed; new forms to be established; new governments to be instituted, organized, and administered, upon principles which shall reconcile the seeming

conflict between liberty and law, and secure to every one the enjoyment of regulated constitutional freedom.

And it is at this moment, fellow-citizens, when this vast labor is about to be commenced, when the files of the Old World are searched in vain for precedents, and the file-leaders of the Old World are looked to in vain for pioneers, and when all eyes are strained to find the men, to find the man, who is sufficient for these things, it is at such a moment that we are assembled on this pinnacle of the American republic—I might almost say by some divine impulse and direction—to hold up afresh to the admiration and imitation of mankind the character and example of George Washington.

Let us contemplate that character and that example for a moment, and see whether there be anything in all the treasures of our country's fame, I do not say merely of equal intrinsic value, but of such eminent adaptation to the exigencies of the time and the immediate wants of the world.

I will enter into no details of his personal history. Washington's birthday is a national festival. His whole life, boyhood and manhood, has been learned by heart by us all. Who knows not that he was a self-made man? Who knows not that the only education which he enjoyed was that of the common schools of Virginia, which, at that day, were of the very commonest sort? Who remembers not those extraordinary youthful adventures, by which he was trained up to the great work of his destiny? Who remembers not the labors and exposures which he encountered as a land surveyor at the early age of sixteen years? Who has forgotten the perils of his journey of forty-one days, and five hundred and sixty miles, from Williamsburg to French creek, when sent, at the age of only twenty-one, as commissioner from Governor Dinwiddie, to demand of the French forces their authority for invading the king's dominions? Who has not followed him a hundred times, with breathless anxiety, as he threads his way through that pathless wilderness, at one moment fired at by Indians at fifteen paces, at the next wrecked upon a raft amid snow and ice, and subjected throughout to every danger, which treacherous elements or still more treacherous enemies could involve? Who has forgotten his hardly less miraculous escape, a few years later, on the banks of the Monongahela, when, foremost in that fearful fight, he was the only mounted officer of the British troops who was not either killed or desperately wounded?

Let me not speak of Washington as a merely self-made man. There were influences employed in moulding and making him,

far, far above his own control. Bereft of his father at the tender age of eleven years, he had a mother left, to whom the world can never over-estimate its debt. And higher, holier still, was the guardianship so signally manifested in more than one event of his life. "By the all-powerful dispensations of Providence," wrote Washington himself to his venerated parent, after Braddock's defeat, "I have been protected beyond all human probability or expectation; for I had four bullets through my coat, and two horses shot under me; yet I escaped unhurt, although death was leveling my companions on every side of me." Well did the eloquent pastor of a neighboring parish, on his return, point out to the public that heroic youth, Colonel Washington, whom (says he) "I can not but hope Providence has hitherto preserved in so signal a manner for some important service to the country."

And not less natural or less striking was the testimony of the Indian chief, who told Washington, fifteen years afterward, that, "at the battle of the Monongahela, he had singled him out as a conspicuous object, had fired his rifle at him many times, and directed his young warriors to do the same, but that, to his utter astonishment, none of their balls took effect; that he was then persuaded that the youthful hero was under the special guardianship of the Great Spirit, and immediately ceased to fire at him; and that he was now come to pay homage to the man who was the particular favorite of Heaven, and who could never die in battle."

Our revolutionary fathers had many causes for adoring the invisible Hand by which they were guided and guarded in their great struggle for liberty; but none, none stronger than this providential preparation and preservation of their destined chief. Be it ours to prolong that anthem of gratitude which may no more be heard from their mute lips: "The grave can not praise thee; death can not celebrate thee; but the living, the living, they shall praise thee, as we do this day!"

Of the public services of WASHINGTON to our own country, for which he was thus prepared and preserved, it is enough to say, that in the three great epochs of our national history he stands forth pre-eminent and peerless, the master-spirit of the time.

In the war of the revolution we see him the leader of our armies.

In the formation of the constitution, we see him the president of our councils.

In the organization of the federal government, we see him the chief magistrate of our republic.

Indeed, from the memorable day when, under the unheard but by no means inauspicious

salute of both British and American batteries, engaged in no holiday exercise on Bunker hill, it was unanimously resolved, that, George Washington having been chosen commander-in-chief of such forces as are or shall be raised for the maintenance and preservation of American liberty, "This Congress doth now declare that they will maintain and assist him, and adhere to him, the said George Washington, with their lives and fortunes in the same cause;" from this ever-memorable 17th of June, 1775—a day on which (as has been well said*) Providence kept an even balance with the cause, and while it took from us a Warren gave us a Washington—to the 14th day of December, 1799, when he died, we shall search the annals of our land in vain for any important scene, in which he was anything less than the principal figure.

It is, however, the character of Washington, and not the mere part which he played, which I would hold up this day to the world as worthy of endless and universal commemoration. The highest official distinctions may be enjoyed, and the most important public services rendered, by men whose lives will not endure examination. It is the glory of Washington, that the virtues of the man outshone even the brilliancy of his acts, and that the results which he accomplished were only the legitimate exemplifications of the principles which he professed and cherished.

In the whole history of the world it may be doubted whether any man can be found, who has exerted a more controlling influence over men and over events than George Washington. To what did he owe that influence? How did he win, how did he wield, that magic power, that majestic authority, over the minds and hearts of his countrymen and of mankind? In what did the power of Washington consist?

It was not the power of vast learning or varied acquirements. He made no pretensions to scholarship, and had no opportunity for extensive reading.

It was not the power of sparkling wit or glowing rhetoric. Though long associated with deliberative bodies, he never made a set speech in his life, nor ever mingled in a stormy debate.

It was not the power of personal fascination. There was little about him of that gracious affability which sometimes lends such irresistible attraction to men of commanding position. His august presence inspired more of awe than of affection, and his friends, numerous and devoted as they were, were bound to him by ties rather of respect than of love.

It was not the power of a daring and desperate spirit of heroic adventure. "If I ever

said so," replied Washington, when asked whether he had said that there was something charming in the sound of a whistling bullet; "if I ever said so, it was when I was young." He had no passion for mere exploits. He sought no "bubble reputation in the cannon's mouth." With a courage never questioned, and equal to every exigency, he had yet "a wisdom which did guide his valor to act in safety."

In what, then, did the power of Washington consist? When Patrick Henry returned home from the first continental Congress, and was asked who was the greatest man in that body, he replied: "If you speak of eloquence, Mr. Rutledge, of South Carolina, is the greatest orator; but if you speak of solid information and sound judgment, Col. Washington is by far the greatest man on that floor."

When, fifteen years earlier, Washington, at the close of the French war, took his seat for the first time in the house of burgesses of Virginia, and a vote of thanks was presented to him for his military services to the colony, his hesitation and embarrassment were relieved by the speaker, who said, "Sit down, Mr. Washington, your modesty equals your valor; and that surpasses the power of any language that I possess."

But it was not solid information, or sound judgment, or even that rare combination of surpassing modesty and valor, great as these qualities are, which gave Washington such a hold on the regard, respect, and confidence of the American people. I hazard nothing in saying that it was the high moral elements of his character which imparted to it its preponderating force. His incorruptible honesty, his uncompromising truth, his devout reliance on God, the purity of his life, the scrupulousness of his conscience, the disinterestedness of his purposes, his humanity, generosity, and justice—these were the ingredients which, blending harmoniously with solid information and sound judgment and a valor only equalled by his modesty, made up a character to which the world may be fearlessly challenged for a parallel.

"Labor to keep alive in your breast that little spark of celestial fire, *conscience*," was one of a series of maxims which Washington framed or copied for his own use when a boy. His rigid adherence to principle, his steadfast discharge of duty, his utter abandonment of self, his unreserved devotion to whatever interests were committed to his care, attest the more than vestal vigilance with which he observed that maxim. He kept alive that spark. He made it shine before men. He kindled it into a flame which illumined his whole life. No occasion was so momentous, no circumstances were so minute, as to ab-

* By Edward Everett.

solve him from following its guiding ray. The marginal explanation in his account-book, in regard to the expenses of his wife's annual visit to the camp during the revolutionary war, with his passing allusion to the "self-denial" which the exigencies of his country had cost him, furnishes a charming illustration of his habitual exactness. The fact that every barrel of flour which bore the brand of "George Washington, Mount Vernon," was exempted from the customary inspection in the West India ports—that name being regarded as an ample guarantee of the quality and quantity of any article to which it was affixed—supplies a not less striking proof that his exactness was everywhere understood.

Everybody saw that Washington sought nothing for himself. Everybody knew that he sacrificed nothing to personal or to party ends. Hence, the mighty influence, the matchless sway, which he exercised over all around him. "He was the only man in the United States who possessed the confidence of all," said Thomas Jefferson, "there was no other one who was considered as anything more than a party leader."

Who ever thinks of Washington as a mere politician? Who ever associates him with the petty arts and pitiful intrigues of partisan office-seekers or partisan officeholders? Who ever pictures him canvassing for votes, dealing out proscription, or doling out patronage?

"No part of my duty," wrote Washington to Governor Bowdoin, in a letter, the still unpublished original of which is a precious inheritance of my own: "No part of my duty will be more delicate, and in many instances more unpleasant, than that of nominating and appointing persons to office. It will undoubtedly happen that there will be several candidates for the same office, whose pretensions, abilities, and integrity, may be nearly equal, and who will come forward so equally supported in every respect as almost to require the aid of supernatural intuition to fix upon the right. I shall, however, in all events, have the satisfaction to reflect that I entered upon my administration unconfined by a single engagement, uninfluenced by any ties of blood or friendship, and with the best intention and fullest determination to nominate to office those persons only who, upon every consideration, were the most deserving, and who would probably execute their several functions to the interest and credit of the American Union; if such characters could be found by my exploring every avenue of information respecting their merits and pretensions that it was in my power to obtain."

And there was as little of the vulgar hero about him, as there was of the mere politician. At the head of a victorious army, of which he

was the idol—an army too often provoked to the very verge of mutiny by the neglect of an inefficient government—we find him the constant counsellor of subordination and submission to the civil authority. With the sword of a conqueror at his side, we find him the unceasing advocate of peace. Repeatedly invested with more than a power of a Roman dictator, we see him receiving that power with reluctance, employing it with the utmost moderation, and eagerly embracing the earliest opportunity to resign it. The offer of a crown could not, did not, tempt him for an instant from his allegiance to liberty.* He rejected it with indignation and abhorrence, and proceeded to devote all his energies and all his influence, all his popularity and all his ability, to the establishment of that republican system, of which he was from first to last the uncompromising advocate, and with the ultimate success of which he believed the best interests of America and of the world were inseparably connected.

It is thus that, in contemplating the character of Washington, the offices which he held, the acts which he performed, his successes as a statesman, his triumphs as a soldier, almost fade from our sight. It is not the Washington of the Delaware, or the Brandywine, of Germantown, or of Monmouth; it is not Washington, the president of the convention, or the president of the republic, which we admire. We cast our eyes over his life, not to be dazzled by the meteoric lustre of particular passages, but to behold its whole pathway radiant, radiant everywhere, with the true glory of a just, conscientious, consummate man! Of him we feel it to be no exaggeration to say that

"All the ends he aimed at
Were his Country's, his God's, and Truth's."

Of him we feel it to be no exaggeration to say, that he stands upon the page of history the great modern illustration and example of that exquisite and Divine precept, which fell from the lips of the dying monarch of Israel—

"He that ruleth over men must be just, ruling in the fear of God;"

"And he shall be as the light of the morning when the sun riseth, even a morning without clouds!"

And now, fellow-citizens, it is this incomparable and transcendent character, which America, on this occasion, holds up afresh to the admiration of mankind. Believing it to be the only character which could have carried us safely through our own revolutionary struggles, we present it, especially, this day, to the wistful gaze of convulsed and distracted Europe. May we not hope that there may be kindred spirits over the sea, upon

* Sparks' Life of Washington, pp. 354-5.

whom the example may impress itself, till they shall be inflamed with a noble rage to follow it! Shall we not call upon them to turn from a vain reliance upon their own idols, and to behold here, in the mingled moderation and courage, in the combined piety and patriotism, in the blended virtue, principles, wisdom, valor, self-denial, and self-devotion of our Washington, the express image of the man, the only man, for their occasion?

"Daphni, quid antiquæ signorum suspicia ortus,
Ecce Dionisi processit Cæsaris astrum!"

Let us rejoice that our call is anticipated. Washington is no new name to Europe. His star has been seen in every sky, and wise men everywhere have done it homage. To what other merely human being, indeed, has such homage ever before or since been rendered?

"I have a large acquaintance among the most valuable and exalted classes of men," wrote Erskine to Washington himself, "but you are the only being for whom I ever felt an awful reverence."

"Illustrious man!" said Fox of him, in the British house of commons in 1794, "deriving honor less from the splendor of his situation than from the dignity of his mind; before whom all borrowed greatness sinks into insignificance, and all the potentates of Europe become little and contemptible."

"Washington is dead!" proclaimed Napoleon, on hearing of the event. "This great man fought against tyranny; he established the liberty of his country. His memory will be always dear to the French people, as it will be to all free men of the two worlds."

"It will be the duty of the historian and the sage in all ages," says Lord Brougham, "to let no occasion pass of commemorating this illustrious man; and, until time shall be no more, will a test of the progress which our race has made in wisdom and virtue be derived from the veneration paid to the immortal name of Washington."

"One thing is certain," says Guizot—"one thing is certain; that which Washington did—the founding of a free government by order and peace, at the close of the revolution—no other policy than his could have accomplished."

And later, better still: "Efface henceforth the name of Machiavel," said Lamartine, within a few weeks past, in his reply to the Italian association—"efface henceforth the name of Machiavel from your titles of glory, and substitute for it the name of Washington; that is the one which should now be proclaimed; that is the name of modern liberty. It is no longer the name of a politician or a con-

* It was not thought necessary to disfigure the text, by inserting the loyal parenthesis, "excepting the members of our own royal family."

queror that is required; it is that of a man, the most disinterested, the most devoted to the people. This is the man required by liberty. The want of the age is a European Washington!"

And who shall supply that want but he who so vividly realizes it? Enthusiastic, eloquent, admirable Lamartine! Though the magic wires may even now be trembling with the tidings of his downfall, we will not yet quite despair of him. Go on in the high career to which you have been called! Fall in it, if it must be so; but fall not, falter not, from it! Imitate the character you have so nobly appreciated! Fulfil the pledges you have so gloriously given! Plead still against the banner of blood! Strive still against the reign of terror! Aim still

"By winning words to conquer willing hearts,
And make persuasion do the work of fear!"

May a gallant and generous people second you, and the Power which preserved Washington sustain you, until you have secured peace, order, freedom to your country!

"Si qua fata aspera rumpas,
Tu Marcellus eris."

But, fellow-citizens, while we thus commend the character and example of Washington to others, let us not forget to imitate it ourselves. I have spoken of the precise period which we have reached in our own history, as well as in that of the world at large, as giving something of peculiar interest to the proceedings in which we are engaged. I may not, I will not, disturb the harmony of the scene before me by the slightest allusion of a party character. The circumstances of the occasion forbid it; the associations of the day forbid it; the character of him in whose honor we are assembled, forbids it; my own feelings revolt from it. But I may say, I must say, and every one within the sound of my voice will sustain me in saying, that there has been no moment since Washington himself was among us, when it was more important than at this moment that the two great leading principles of his policy should be remembered and cherished.

Those principles were, first, the most complete, cordial, and indissoluble union of the states; and, second, the most entire separation and disentanglement of our own country from all other countries. Perfect union among ourselves, perfect neutrality toward others, and peace, peace, domestic peace, and foreign peace, as the result; this was the chosen and consummate policy of the Father of his country.

But above all, and before all, in the heart

* These forebodings were but too soon fulfilled. The tidings of Lamartine's downfall were received a few days after this address was delivered.

often provoked to the neglect of an and him the con- tion and submis- With the sword find him the un- Repeatedly in- ver of a Roman ing that power with the utmost acing the earliest offer of a crown for an instant * He rejected erence, and pro- rgies and all his and all his ability, republican sys- first to last the ud with the uli- elieved the best the world were

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t is this incom- character, which lds up afresh to Believing it to could have car- n revolutionary cially, this day, ed and distract- hope that there the sea, upon n, pp. 354-'5.

of Washington, was the union of the states; and no opportunity was ever omitted by him, to impress upon his fellow-citizens the profound sense which he entertained, of its vital importance at once to their prosperity and their liberty.

In that incomparable address in which he bade farewell to his countrymen at the close of his presidential service, he touched upon many other topics with the earnestness of a sincere conviction. He called upon them in solemn terms, to "cherish public credit;" to "observe good faith and justice toward all nations," avoiding both "inveterate antipathies, and passionate attachments" toward any; to mitigate and assuage the unquenchable fire of party spirit, "lest, instead of warming, it should consume;" to abstain from characterizing parties by geographical distinctions;" "to promote institutions for the general diffusion of knowledge;" to respect and uphold "religion and morality; those great pillars of human happiness, those firmest props of the duties of men and of citizens."

But what can exceed, what can equal, the accumulated intensity of thought and of expression with which he calls upon them to cling to the union of the states. "It is of infinite moment," says he, in language which we ought never to be weary of hearing or of repeating, "that you should properly estimate the immense value of your national union to your collective and individual happiness; that you should cherish a cordial, habitual, immovable attachment to it; accustoming yourselves to think and speak of it as of the palladium of your political safety and prosperity; watching for its preservation with jealous anxiety; discountenancing whatever may suggest even a suspicion that it can, *in any event*, be abandoned; and indignantly frowning upon the first dawning of every attempt to alienate any portion of our country from the rest, or to enfeeble the sacred ties which now link together the various parts."

The Union, *the Union in any event*, was thus the sentiment of Washington. The Union, *the Union in any event*, let it be our sentiment this day!

Yes, to-day, fellow-citizens, at the very moment when the extension of our boundaries and the multiplication of our territories are producing, directly, and indirectly, among the different members of our political system, so many marked and mourned centrifugal tendencies, let us seize this occasion to renew to each other our vows of allegiance and devotion to the American union, and let us recognise in our common title to the name and the fame of Washington, and in our common veneration for his example and his advice, the all-sufficient centripetal power, which shall

hold the thick clustering stars of our confederacy in one glorious constellation for ever! Let the column which we are about to construct, be at once a pledge and an emblem of perpetual union! Let the foundations be laid, let the superstructure be built up and cemented, let each stone be raised and riveted, in a spirit of national brotherhood! And may the earliest ray of the rising sun—till that sun shall set to rise no more—draw forth from it daily, as from the fabled statue of antiquity, a strain of national harmony, which shall strike a responsive chord in every heart throughout the republic!

Proceed, then, fellow-citizens, with the work for which you have assembled! Lay the corner-stone of a monument which shall adequately bespeak the gratitude of the whole American people to the illustrious Father of his country! Build it to the skies; you can not outreach the loftiness of his principles! Found it upon the massive and eternal rock; you can not make it more enduring than his fame! Construct it of the peerless Parian marble; you can not make it purer than his life! Exhaust upon it the rules and principles of ancient and of modern art; you can not make it more proportionate than his character!

But let not your homage to his memory end here. Think not to transfer to a tablet or a column, the tribute which is due from yourselves. Just honor to Washington can only be rendered by observing his precepts and imitating his example. *Similitudine decoramus*. He has built his own monument. We, and those who come after us in successive generations, are its appointed, its privileged guardians. This wide-spread republic is the true monument to Washington. Maintain its independence. Uphold its constitution. Preserve its union. Defend its liberty. Let it stand before the world in all its original strength and beauty, securing peace, order, equality, and freedom to all within its boundaries, and shedding light, and hope, and joy, upon the pathway of human liberty throughout the world; and Washington needs no other monument. Other structures may fitly testify our veneration for him; this, this alone, can adequately illustrate his services to mankind.

Nor does he need even this. The republic may perish; the wide arch of our ranged union may fall; star by star its glories may expire; stone after stone its columns and its capitol may moulder and crumble; all other names which adorn its annals may be forgotten; but as long as human hearts shall anywhere pant, or human tongues shall anywhere plead, for a true, rational, constitutional liberty, those hearts shall enshrine the memory, and those tongues shall prolong the fame, of
GEORGE WASHINGTON!

VISITATIONS OF PESTILENCE.

SINCE the Christian era there have been recorded twenty extensive European pestilences, besides others whose devastation was more local. In the year 265, a pestilence burst on the Roman empire, then comprehending the civilized world. It continued for fifteen years, and "ragged without interruption in every province, in every city, and almost every family of the empire. During some time five thousand persons died daily in Rome."

A reference to the registers of Alexandria shows that "above half the population of that city has perished; and, could we venture to extend the analogy to the other provinces, we might suspect that war, pestilence, and famine, had consumed in a few years, the moiety of the human species."

In the middle of the sixth century, Constantinople, then the capital of the world, was startled by the approach of the plague. From the terror of the time, it is difficult to discover its origin: but it was supposed to have come from Egypt. Its mortality was indescribable. "During three months, five, and at length ten thousand persons died each day in Constantinople. Many cities of the east were left vacant; and in the several districts of Italy the harvest and the vintage perished on the ground."

"The disease pursued a double path; it spread to the east, over Syria, Persia, and the Indies; and penetrated to the east, along the coast of Africa, and over the continent of Europe." This pestilence was of such peculiar malignity that it was not abated by the change of the season. In time it vanished, but revived; and "it was not till the end of the calamitous period of fifty-two years that mankind recovered their health, or the air recovered its salubrious quality."

"The triple scourge of war, pestilence, and famine, afflicted the subjects of Justinian; and his reign is disgraced by a visible decrease of the human species, which has never been repaired in some of the fairest countries of the globe."

Another most memorable pestilence was brought by the commerce of the Levant to Europe, in the middle of the fourteenth century. In the imperfect narratives of those days of universal distress, the place of the origin, and the degree of the havoc in the east, remain unknown. But its first mortality in Europe was felt along the borders of the Mediterranean. From those, slowly but with irresistible progress, and boundless waste of life, it ascended toward Germany, and continued advancing to the north, until it ceased through want of victims. From its first appearance in the Levant to its close, it ravaged

Europe for nearly three years. It was calculated to have destroyed a third part of the whole population.

In those general devastations, London frequently suffered. But the plague of 1665 has made the deepest impression on the national memory. Though scarcely passing beyond the limits of the capital (then, perhaps, not a third of its present size), its mortality was vast and almost exterminating. A large part of the population had fled into the country: yet, from the beginning of June to the end of the year, the deaths exclusively by the plague, were calculated at sixty-eight thousand.

A large portion of this mortality might probably have been prevented by due precaution and the early employment of medical science. The closeness of the streets, the crowding of the people, and the habitual disregard of ventilation, must have fostered this dreadful disease. But they can not account for its origin, for its direction, or for its virulence. These were independent of man.

It has been remarked as extraordinary, that the Mosaic law, which contains so many regulations on the prevention and treatment of disease, should have made no provision against the plague. And the twofold reason has been assigned that the ravages of the disease were so rapid as to make all precaution useless; and that human sagacity must be the best guide in a disease, whose coming depended on such a variety of circumstances.

The more probable reason appears to me, its being regarded as a direct weapon of divine judgment; against whose power the law of course would offer no means of contending. We observe that Moses spoke of it as the direct equivalent to slaughter: "Lest he smite us with pestilence and the sword." The divine displeasure, on the numbering of the people by David, was expressed by giving him his choice of three punishments—seven years' famine, three months' flight before an invader, or three days of pestilence. It conveys an intense conception of the horrors of pestilence, that even the word of inspiration should regard its three days to be equal to three months of slaughter by the rage of man, or even seven years of famine; both the deepest trials of mere national endurance. The king chose pestilence, as being the most rapid and exclusive action of the divine wrath.

And David said: "Let us fall now into the hand of the Lord."—"So the Lord sent a pestilence upon Israel, from the morning even to the time appointed; and there died of the people, even from Dan to Beer-sheba, seventy thousand men." 2 Sam. xxiv. 15.

Another remarkable circumstance is, that no plague ever appeared to have produced a

moral reform. Instead of the natural awe of Heaven, it seems to have been signalized by the wildest excess—by the fiercer crimes and more reckless carousals of despair. Rebellion, murder, and the frantic indulgence of every passion and appetite, have in general characterized the progress of the mortality. It dates the especial prodigality of men from the era of the plague. "Let us eat and drink, for to-morrow we die"—is the strong expression used by Isaiah to represent the last mad festivity of a city about to be stormed, and despairing of resistance; the words used by St. Paul, to express the condition of man hopeless of immortality, were evidently the popular impulse to the majority of instances; perhaps in all. The plague was simply a divine punishment, the scourge, and not the teacher.

THE SMITHSONIAN INSTITUTE.

THE engraving of this new edifice will convey a better idea of its architecture than any description we can give. It is built in the style that prevailed in southern Europe during the twelfth century—the Norman or Lombard style, which was succeeded by the Gothic. When completed, it will consist of a centre which will be fifty by two hundred feet inside, with two connecting ranges sixty feet in length in the clear, and averaging, forty-seven feet in breadth. An east wing forty-five by seventy-five feet in the clear, with a vestibule and porch attached, and a west wing thirty-four by sixty-five feet in the clear, exclusive of the spires or semi-circular projections.

There will be two central front towers on the north, one central rear tower on the south, besides a bell tower, a large octagonal and two smaller towers at the different angles of the building, with porches, vestibules, stair-halls, &c., attached to the centre. The east wing, or chymical lecture-room, will have a bell-tower, and the west wing a campanile tower and apsis connected with it. The central building will contain in the first story the library, ninety by fifty feet, and the principal lecture-room, to hold from eight hundred to one thousand persons. The second story will contain the museum, two hundred by fifty feet. The west wing will contain the gallery of art, sixty-five feet long; the east wing, the chymical lecture-room, forty-five by seventy-five feet, and laboratory.

The extreme length of the building will be about four hundred and fifty feet, with a breadth in the centre of over one hundred feet.

The centre building rises sixty feet, and with its principal tower one hundred and fifty feet; the wings from thirty to forty feet high, and their towers of various heights, from eighty to one hundred feet.

Connected with the gallery of art, there will be studios, in which young artists may copy without interruption. The library will contain, at least, one hundred thousand volumes, and will embrace many valuable works, not to be found elsewhere in the United States. The eastern wing will first be finished and put in order for the occupation of the secretary, and for the immediate purpose of the board. The institution will probably be able to commence operations some time next winter, when courses of lectures will be delivered by some of the most able lecturers in the country.

The committee of the Smithsonian Institute have in course of preparation, as their first elaborate production, a treatise entitled, "Hints on Public Architecture," to contain views of the principal public buildings in the country, together with a large amount of practical information. A valuable work on the "Indian Mounds" of this country has also been adopted by the institute, and will soon be brought out.

EARLY PLEASURES.

"But why the morning of this busy scene,
More sweet than all succeeding life has been?
From the mild influence of its real day,
No fancied bliss its brief existence drew;
Those passions so fertile, wear no trace
The present pleased, the morrow, too, we
Some secret movement cheered the troubled hours,
And lovelier sunshine followed every shower."

EARLY pleasures! What the very expression is beautiful, most beautiful; and mingling with thoughts and recollections which are animated and delightful, and awakening spontaneously a train of associations, the most vivid in their character, and the most inspiring in the effect produced. In such a world as ours, where, as we advance in life, we realize so many anxieties, have to pass through so many changes, and to encounter so many storms, where is the individual possessed of any sensibility, cherishing any appropriate thought and emotion, who does not recur, with powerful and enkindling feeling, to early pleasures? to that sunny and delightful period when the mind was vivacity itself; when the spirits were nothing but buoyancy; when the whole nature was not only prepared for enjoyment, but was full of it. Every object was novel in its aspect; every scene appeared to be clothed with radiance and beauty. The

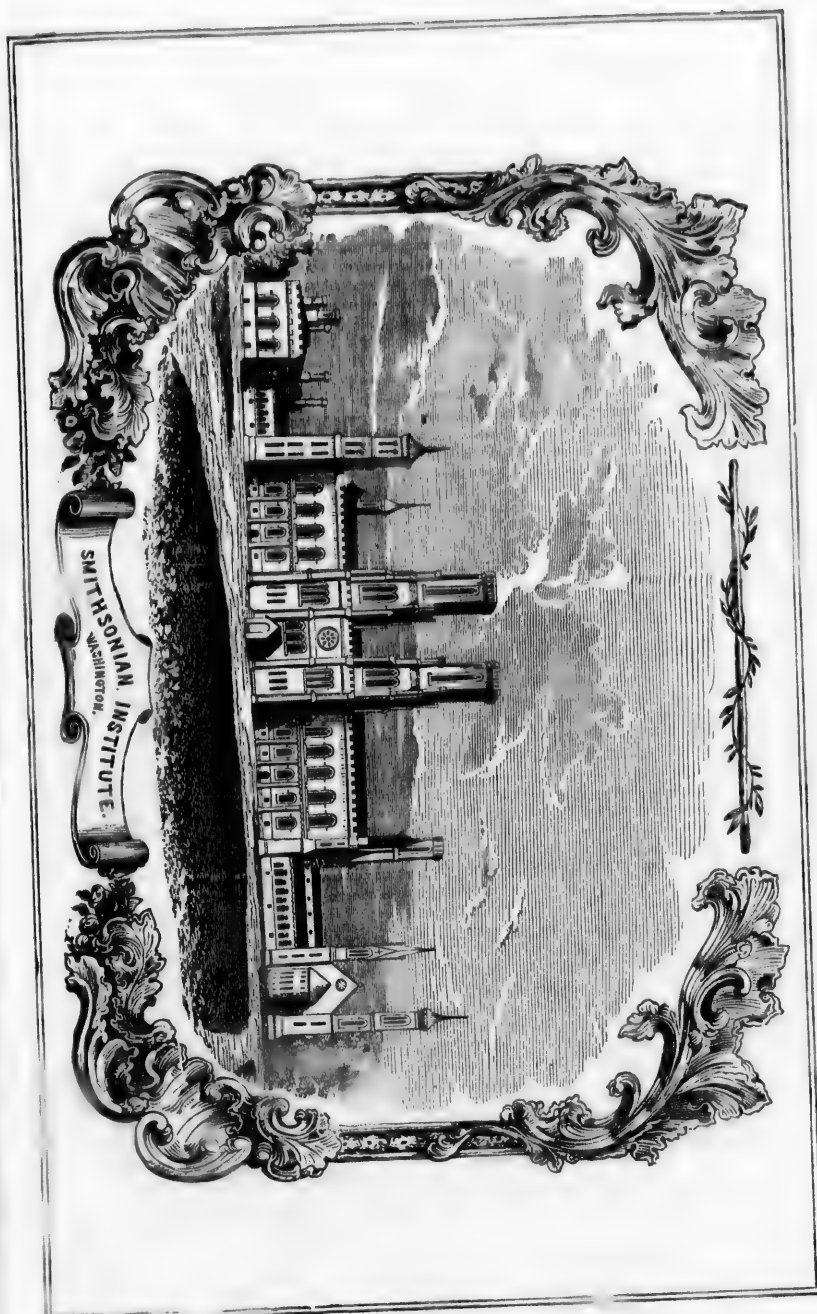
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sky which arched over us was not only fair, but without a cloud; and loveliness of the purest order was visible in every direction.

How much do we see in the kindness of God in attuning the mind to early pleasures; in communicating a disposition to receive gratification, and gratification of the highest kind, from a thousand sources, which, in succeeding life, would, perhaps, not awaken the same enjoyment at all—at any rate, not to the same extent. Thus it is that we see the goodness of our heavenly Father—the endearing kindness of that Providence which is ever ready to bless us, and to render us truly happy. Thus it is that the ruggedness of the road in early life is diminished, or slightly felt; and those elevations which we have to ascend are reached, not only without difficulty, but with emotions of pleasure.

If in early life everything wore an aspect of gloom; if at that interesting and important period depressing and painful emotions were awakened, and there was little or no capacity for enjoyment, how different would be our condition in the initiatory stages of existence! How dull, how sombre, how clouded everything would appear! As we advanced in years, how dissimilar would be our feelings, and the habits of our minds—indeed, our entire character—from those sentiments which we have been accustomed to cherish! Therefore, let us express lively gratitude to a kind and gracious God, that he has rendered us peculiarly susceptible of early pleasures, which are pure, healthful, and most beneficial, and communicated to us so many, during the spring and the may-bloom of our existence.

Our early pleasures, with those of thousands, have been derived from *rural scenes*; from rural sights and sounds; from familiarity with the objects of creation; from rambles—quiet, long and habitual rambles—amid the beauty and luxuriance of nature. How have we traversed the fine meadows of our lovely country, especially during early spring! How have we admired their rich verdure, and trodden, with exquisite and ever-fresh delight, on their soft carpet, in “the leafy month of June!” How have we plucked “the meek-eyed daisy,” and the golden butter-cup, with which they have been enamelled! With what eagerness have we gone out into the beautiful lanes and dells in April, to gather “the pale primrose,” and to hunt after the fragrant violet, and to bring home, with delight, a hand well filled to adorn our mantle-piece. In early May, how have we repaired to the well-known place for cowslips, and what a burst of joy has been induced, when hundreds and thousands of them, fully blown, on some extensive field, were *first* descried! What a treasure was the *first* nosegay of cowslips!

How have we plunged into the thick and umbrageous wood, or the more extended forest, fearless of danger, and finding something as we advanced, step by step, to awaken our astonishment and admiration! How have we ranged some beautifully ornamented park, and deeply felt the loveliness expanding around! How have we delighted ourselves in our own garden, or in that of some dear friend, and rejoiced either in the promise of rich fruit, or in the ripe and luxuriant clusters which we have seen on every side! How difficult to repress our wonder and our joy.

How have we ascended the lofty hill, and surveyed the wide expanse of nature, stretching to an almost immeasurable distance, before and behind, and, indeed, all around, while beauty and grandeur, variety and harmony, have been delightfully blended! How have we traced the meandering river's course, or walked, half-knee high, in the shallow stream; or hunted after the tiny fish which were swimming so happily in the little pellucid brook, while the sunbeams have been playing so brightly on it!

How have we gone down to the seaside, and roamed, for hours, on the sandy or pebbly beach, seeking after shells and curious seaweeds, and wondering at the breakers, as they came successively dashing to the shore! These, and a thousand circumstances in connexion with nature, have riveted our attention, inspired our interest, and enchained our minds, in early life. These have been, and still continue to be, some of our purest, sweetest, and most unsating pleasures, and, the best of all is, they are pleasures which can *always*, to a great extent, if the mind be in a proper frame, be realized. How full of eloquence and beauty are the lines of our favorite Beattie:—

“How canst thou renounce the boundless store
Of charms, which Nature to her votary yields—
The warbling woodland, the resounding shore,
The pomp of groves, the garniture of fields,
All that the genial ray of morning gilds,
And all that echoes to the song of even,
All that the mountain's sheltering bosom shields,
And all the dread magnificence of heaven,
O how canst thou renounce and hope to be forgiven?”

Our early pleasures, with those of multitudes, have been derived from *reading*—varied, appropriate, instructive reading. And what art is more valuable to acquire! What taste is more desirable to form? What habit is more important to cultivate? What treasures does the perusal of interesting and sterling books, attentively and carefully gone through, put into our possession! What views do books open! What counsels do they furnish! What narrations do they detail! What principles do they inculcate! What incen-

into the thick and more extended forest, finding something new to awaken our attention! How have we ornamented park, and expanded around! ourselves in our own dear friend, and repose of rich fruit, or clusters which we! How difficult to our joy.

and the lofty hill, and of nature, stretchable distance, beaded, all around, while variety and harmony, ended! How have the river's course, or in the shallow stream; which were swimming little pellucid brook, we have been playing so

down to the seashore, in the sandy or pebbly shells and curious sea at the breakers, as dashing to the shore! circumstances in conversation riveted our attention, and enchained our These have been, and of our purest, sweetest pleasures, and, the pleasures which can at, if the mind be in a d. How full of eloquence lines of our favorite

the boundless store are to her votary yields—the resounding shore, the garniture of fields, morning gilds, the song of even, heltering bosom shields, significance of heaven, and hope to be forgiven?"

with those of multitudes from reading—frustrative reading. And able to acquire? What to form? What habit cultivate? What treasure of interesting and sterile and carefully gone possession! What views and counsels do they furnish to do they detail! What ulcate! What incen-

tives to all that is noble and virtuous, benevolent and holy, do they communicate! Some of the purest and richest of our early pleasures, with that of millions (and the number is increasing indefinitely), have been gained from reading. The mind has been riveted, and all its faculties enchained. How often has evening after evening been delightfully spent in perusing some spirit-fixing volume, which has been new to the youthful mind, and, by its delineations of character, its narration of incident and adventure, or its powerful appeal, has produced deep and long-remembered impressions. Never can we forget how we first devoured "Robinson Crusoe," and were awe-struck by its more solemn and awakening scenes, or were charmed with its more animated and joyous narrations. What a world opened on us when this book was first read!

How can we fail to remember the eagerness with which we perused, for the first time, the far-famed "Pilgrim's Progress!"—that precious volume, with its vivid and life-like sketches, with its gallery of moral and religious paintings, the figures almost appearing to be moving and walking before us—with its affectionate and impressive exhortations—with its original and powerful admonitions, and all in perfect harmony with the word of God; this gem of books, with all it contains, is ever present with us.

John Bunyan's "Holy War," when we first perused it, awakened the deepest emotions, and, to this hour, its earliest perusal is remembered as being among our choicest pleasures.

The "Life of Henry Kirke White" was a favorite little volume; and, after its first reading, we took so deep an interest in the character, the struggles, the poetry, and the letters of poor Henry, that we were obliged to put the touching book of Southey under our pillow, and read it, again and again, as soon as we awoke.

Rowland Hill's "Village Dialogues" constituted a volume to which, in our youth, we resorted with profound and growing interest; and, when it was perused for the first time, how did we turn again and again to honest Thomas Newman—to that beautiful delineation of a gospel minister, the Rev. Mr. Lovegood—to the character and death of Mr. Merriyman—to honest Farmer Littleworth and his son Henry—to Squire Worthy—to Madam Toogood and Mr. Slapdash—and, so long as we live, we can not forget the ignorance, bigotry, unlovely and unchristian spirit, of that mock-minister, Parson Doolittle. We never think of Rowland Hill, with all his eccentricities, and, moreover, with all the fine features, both of his mind and character, without blessing his memory for that choice volume of

dialogues, so full of character, of pathos, of sage and acute remark, to which we now allude, and which we place always near Bunyan's "Pilgrim."

Our early pleasures have been derived from our home. These enjoyments, with millions of the most virtuous and estimable of the human family, have ever been among their choicest. None are so refined, so pure, so tranquillizing, so steady and permanent. Well do we remember the comforts of the endeared domestic circle—all the members of that circle collected—not one absent; the tranquil fireside; the little snug parlor, where we have often read and enjoyed our favorite volumes; the delightful evenings in autumn; and, especially, in winter, when, the curtains being drawn, the tea having been removed, the fire brightly blazing, one would peruse aloud some interesting and captivating book, while the other members of the family would attentively listen, as they pursued their work, and the more juvenile ones would be all interest and pleasure. What cheerful and happy evenings have been thus spent! Evenings whose associations will always remain with us, and awaken emotions of pensiveness, yet of devout gratitude and joy.

"Oft in our peaceful home, that sheltered nest,
Where still our best affections love to rest,
And memory guards her treasures to the last,
Or dwells, with pensive joy, on pleasures past.
The conscious mind, assisted by her power,
The treasured sweets of every passing hour
Can bring again to second life, and view
Their joys as pleasing as when first they flew."

Our early pleasures have been derived from some interesting youthful companions, those of kindred tastes and sentiments; those who have thought with us, felt with us, sported with us, labored with us. What conversations have we enjoyed with them! What rambles have we taken with them! What extended and happy walks in the wide field of nature! As they grew up, our attachment to them increased, and theirs to us augmented. We were rarely a day apart. But where are they now? What changes have been accomplished! What severances effected! How many of them have departed to eternity, and have been laid in an early grave! Shall we meet them in heaven?

Our early pleasures have been derived from the sanctuary; yes, our richest, our sweetest, our highest. We longed for the sabbath, when we might repair to the sanctuary—observe the delightful exercises of the sanctuary—partake of the tranquil and enviable enjoyments of the sanctuary. Our walk to the sanctuary was one of the most pleasing. How was that walk anticipated; and when, on the sabbath morning, we entered the building

where we were wont to worship, what emotions, of the most grateful kind, pervaded our hearts! How we rejoiced to see our beloved pastor enter his pulpit! With what zest we celebrated the praises of God! How it delighted us to hear the songs of Zion sweetly sung! How it gladdened the spirit to listen to the burst of praise, after a glowing and beautiful sermon, full of the pure gospel of Christ! How we returned home, longing for the sabbath to come again, and almost wishing that *every day* could be transformed into a sabbath-day!

These have been among our early pleasures; dear readers, have they been among yours? We hope so. If they have been, do you not feel how pure they have been; how rich they have been; how full of zest they have been; with what bloom and beauty they have been clothed; and what an impression they have produced?

Early pleasures should be *recurred to*. The mind should accustom itself to dwell on them. Memory should love to linger around them. If the recollection be appropriately indulged, lively gratitude will be awakened; pleasing and powerful emotions will be inspired. We shall find present happiness increased, and moral and religious influences augmented.

And let us not, as we advance in life, regret, unduly and unwisely regret, that the vivacity of our early pleasures has passed away; but let us cherish unaffected gratitude for all the enjoyments, so rich, so varied, and so vivacious, which we have realized; and let us cultivate and improve the numerous pleasures, refined and tranquillizing in their nature, with which a kind Providence is still favoring us. Like the bee, let us extract honey from every odorous flower. Let us remember that pleasures, of the richest and purest kind, may be gained from almost innumerable sources; and let us be looking forward to the purer, the higher, the more exquisite, and the endless pleasures of paradise.

We would remark, in concluding these observations: parents, be wise, in relation to your offspring; endeavor, in *early life*, to *make your children happy*. See that they are surrounded by what is calculated to render them cheerful and animated. Let them perceive that you are solicitous to promote their enjoyment in everything that is healthful and pure. Let not your children be made *gloomy*. Take every weight from the mind of a child. Do not envelop your children with a dark and sombre atmosphere. Mothers walk out with your offspring, and show them what is beautiful and grand in nature. Let them see that you are happy, if they are happy. Fathers, let your children accompany you in your

rambles, and explain to them that what you see and admire is worthy of their attention. Answer their intelligent and numerous, though sometimes most amusing questions. Talk to them about the wonders of the heavens, the beauty of the earth, the grandeur and extent of the ocean; the wisdom, power, and goodness of God in all. Accustom them to read and think on these subjects. Cherish early friendships of the *right kind*; and, above all, let your children go with you to the house of God, that *early habits of worship* may be formed, and that, by the divine blessing, an *early spirit of devotion* may be cultivated.

Blissful, indeed, is the thought of a *whole family* meeting in heaven! Husband and wife, brethren and sisters, *all* before the throne of the Redeemer at last! one by one parting in love, in the prospect of a rapturous and unbroken meeting in paradise.

"Such tender chains connect the mind with earth,
Till mercy kindly terminates the span;
That bounds the present littleness of man;
And, like the gale to frozen waters given,
Dissolves each link, and wafts the soul to heaven."

THE BURYING BEETLE.

A FOREIGN naturalist gives a very interesting account of the industry of this insect. He had often remarked that dead moles, when laid upon the ground, especially upon loose earth, were sure to disappear in the course of two or three days—often in twelve hours. To ascertain the cause, he placed a mole upon one of the beds of his garden. It had disappeared on the third morning; and on digging where it had been laid, he found it buried to the depth of three inches, and under it four beetles, which seemed to have been the agents in this singular burial. Not perceiving anything particular in the mole, he buried it again; and on examining it at the end of six days, he found it swarming with maggots, apparently the issue of the beetles, which Mr. Gleditsch now naturally concluded had buried the carcass for the food of their young. To determine these points more clearly, he put four of these insects into a glass vessel, half filled with earth and properly secured, and upon the surface of the earth, two frogs. In less than twelve hours one of the frogs was buried by two of the beetles; the other two ran about the whole day, as if busied in measuring the size of the remaining frog, which on the third day was also found buried. He then introduced a dead linnet. A pair of beetles were soon engaged upon the bird. They began their operations by pushing out the earth from under the body, so as to form a hole for its

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reception; and it was curious to see the efforts which the beetles made, by dragging at the feathers of the bird from below, to pull it into its grave. The male having driven the female away, continued the work alone for five hours. He lifted up the bird, changed its place, turned it and arranged it in the grave, and from time to time came out of the hole, mounted upon it, and trode it under foot, and then retired below and pulled it down. At length, apparently wearied with this uninterrupted labor, it came forth and leaned its head upon the earth beside the bird, without the smallest motion, as if to rest itself, for a full hour, when it again crept under the earth. The next day, in the morning, the bird was an inch and a half under the ground, and the trench remained open the whole day, the corpse seeming as if laid out upon a bier, surrounded with a rampart of mould.

In the evening it had sunk half an inch lower, and in another day the work was completed, and the bird covered. M. Gleditsch continued to add other small dead animals, which were all sooner or later buried; and the result of his experiment was, that in fifty days four beetles had interred, in the very small space of earth allotted to them, twelve carcasses; viz., four frogs, three small birds, two fishes, one mole, and two grasshoppers, besides the entrails of a fish, and two morsels of the lungs of an ox. In another experiment, a single beetle buried a mole forty times its own bulk and weight in two days.

PITTSBURG.

PITTSBURG, the capital of Allegany county, Pennsylvania, distinguished as the great manufacturing city of the west, is situated on a triangular point at the junction of the Allegany and Monongahela, in latitude north 40 degrees, 26 minutes, 25 seconds, and longitude west from Greenwich 79 degrees 59 minutes. It is three hundred miles west from Philadelphia, one hundred and twenty south of Lake Erie, one thousand and one hundred by land, and two thousand and twenty-nine by water, above New Orleans. The Allegany comes down with a strong current from the northeast, and sweeping suddenly round to the northwest, receives the more gentle current of the Monongahela from the south—their combined waters flowing on to the Mississippi under the name of the Ohio, or beautiful river. The aborigines and the French considered the Allegany and Ohio to be the same stream, and the Monongahela to be a tributary—*Allegany* being a word in the

Delaware language, and O-hee-o in the Seneca, both meaning *fair water*. Hence the French term *Belle Riviere*, was only a translation of the Indian name.

The alluvial bottom on which the city is built is quite limited; for immediately back of it, and at less than a mile from the point, rises Grant's hill (on which the courthouse stands), with Ayres' hill on the west, and Quarry hill on the east of Grant's. At the foot of these hills there extends up the Allegany a strip of alluvial land about a quarter of a mile wide, on which the suburb Bayardstown is built; and on the Monongahela side a still narrower margin. The city is rapidly pushing its eastern limits on to the sides and summits of these hills. Grant's hill is already occupied. Opposite to Pittsburgh, on a beautiful plain on the north bank of the Allegany, is the large city of ALLEGANY; below it a mile or two is the more rural village of MANCHESTER; while on the other side of Pittsburgh, across the Monongahela, the smoky street of SLIGO, with its noisy manufactories, is nestled under the high precipice of Coal hill; and about two miles above Sligo, where the alluvial bottom spreads out wider, lies the large manufacturing town of BIRMINGHAM. All these villages may be considered as belonging to and forming part of one great manufacturing and commercial city.

A board of inquiry visited Pittsburgh, in 1841, for the purpose of selecting a site for the United States Marine hospital. The editor of the *Wheeling Times*, in speaking of this visit, and the prospect from the hills, envying the city, says:—

"This board found Pittsburgh a much larger place than Wheeling; they found it a thriving place, with numerous engines, furnaces, and machinery; they found it with a rich and industrious population—a people that would work, and would therefore prosper—at the same time they found them an hospitable, gentlemanly class of beings, possessed of intelligence and willing to impart it. They doubtless took an early excursion upon the hills that environ the city. They looked down, and a sea of smoke lay like the clouds upon Chimborazo's base. No breath of air moved its surface; but a sound rose from its depths like the roar of Niagara's waters, or the warring of the spirits in the cavern of storms. They looked around them, and saw no signs of life or human habitation. They looked above them, and the summer sun, like a haughty warrior, was driving his coursers up the eastern sky. Then from the sea of smoke a vapor rose—another and another cloud rode away, and a speck of silvery sheen glittered in the sunbeams.

"Again, a spire came into view, pointing

heavenward its long slim finger; then a roof—a house-top—a street; and lo! a city lay like a map spread out by magic hand, and ten thousand busy mortals were seen in the pursuit of wealth, of fame, of love, of fashion. On the left, a noble river came heaving onward from the wilderness of the north, bearing on its bosom the treasures of the forest. On the right, an unassuming, but not less useful current, quietly yielded to the vessel's prow that bore from a more genial soil the products of the earth. They looked again, and extending downward through fertile and cultivated vales, checkered with gently swelling hills, they saw the giant trunk formed by the union of these noble branches. Ruffling its mirrored surface, they saw the noble steamer leaping like the panting courser, bearing a rich burden from the far sunny south; another, gathering strength and rolling onward to commerce its long journey past fertile fields, high hills, rich and flourishing cities, and forests wide and drear, bearing the handiwork of her artisans to Mississippi, Texas, Mexico, the groves of India, and the hills of Pernambuco—nay, to every land to which the sun in its daily course gives light. Such they saw Pittsburg; and as such, as a citizen of the west, we are proud of her."

With the villages on the left bank of the Monongahela, Pittsburg is connected by the Monongahela bridge, one thousand and five hundred feet in length, having eight arches resting on stone piers. This bridge was erected in 1818, at a cost of \$102,450. Over the Allegheny there are no less than four bridges crossing to the Allegheny city, besides the splendid aqueduct of the Pennsylvania canal. The first of these bridges was erected in 1819 at the expense of \$95,250. It is one thousand one hundred and twenty-two feet in length, resting on six piers of stone, and is elevated thirty-eight feet above low water.

There are in Pittsburg and its environs, within convenient walking distance, seventeen presbyterian churches, three Cumberland presbyterian, twelve methodist episcopal, three protestant methodist, four baptist, four Roman catholic, five episcopal, two associate, four associate reformed, two evangelical Lutheran, two congregational, two disciples' churches, one "church of God," one unitarian, one German evangelical protestant, one German reformed, three Welsh, and four African churches of different denominations.

The population of Pittsburg, in 1786, was by estimate about five hundred; in 1796, according to the assessor's lists, one thousand three hundred and ninety-five; in 1810, about five thousand; in 1820, seven thousand two hundred and forty-eight; in 1830, including Allegheny and the suburbs, twenty-one thou-

sand nine hundred and twelve; and in 1840, including the same, thirty-eight thousand, nine hundred and thirty-one.

Pittsburg owes its pre-eminence to the fortunate combination of several advantages. It is, with slight exceptions, at the head of steamboat navigation; it is also the terminating point of the main line of internal improvements. It is the mart of portions of Virginia and New York, as well as of western Pennsylvania; while the Ohio opens to the enterprise of its citizens the whole of the Mississippi valley. The exhaustless banks of coal in the neighboring hills, and the excellent mines of iron ore found in great abundance in the countries along the mountains and on the banks of the Ohio below, together with the vast forests of pine timber on the headwaters of the Allegheny river, give to this city its pre-eminence over all others in the west for manufacturing purposes.

To enumerate the various manufacturing establishments of this great workshop, does not fall within the scope of this article. The principal articles of manufacture are steamboats, steam-engines, and a great variety of machinery, of both iron and wood; bar-iron, nails, ploughs, and agricultural implements; glass, cotton-cloths, leather, and saddlery; flooring-boards; with a great number of articles of which the manufacture is prosecuted on a smaller scale. The steam power exerted in these various departments is immense; probably greater in proportion to the population, than any other city in the Union. To strangers the manufactories are well worth a visit, especially those of glass, nails, bar and rolled iron.

There is much moral power in this city; many men of talents in the learned professions, whose light shines throughout the great valley of the west; many benevolent societies and institutions of learning.

MISFORTUNE.—The morning of life is the season in which, though we struggle with, we may hope to overcome adversity. Despair seldom visits the smooth forehead, or sits upon the yet unwrinkled skin: but that misfortune is chiefly to be dreaded which, lurking unobserved in the flowery paths of youth, or perhaps fleeing far from them, forbears its malice until the voice of spring is heard no more—until the sinewy summer of life has passed away—until pale and shivering autumn has come—and then, when the bright prospect is already dimmed, and the best hopes of existence destroyed, strikes with a serpent's fang, and rejoices not in its individual strength, but over our own unstruggling and miserable submission.

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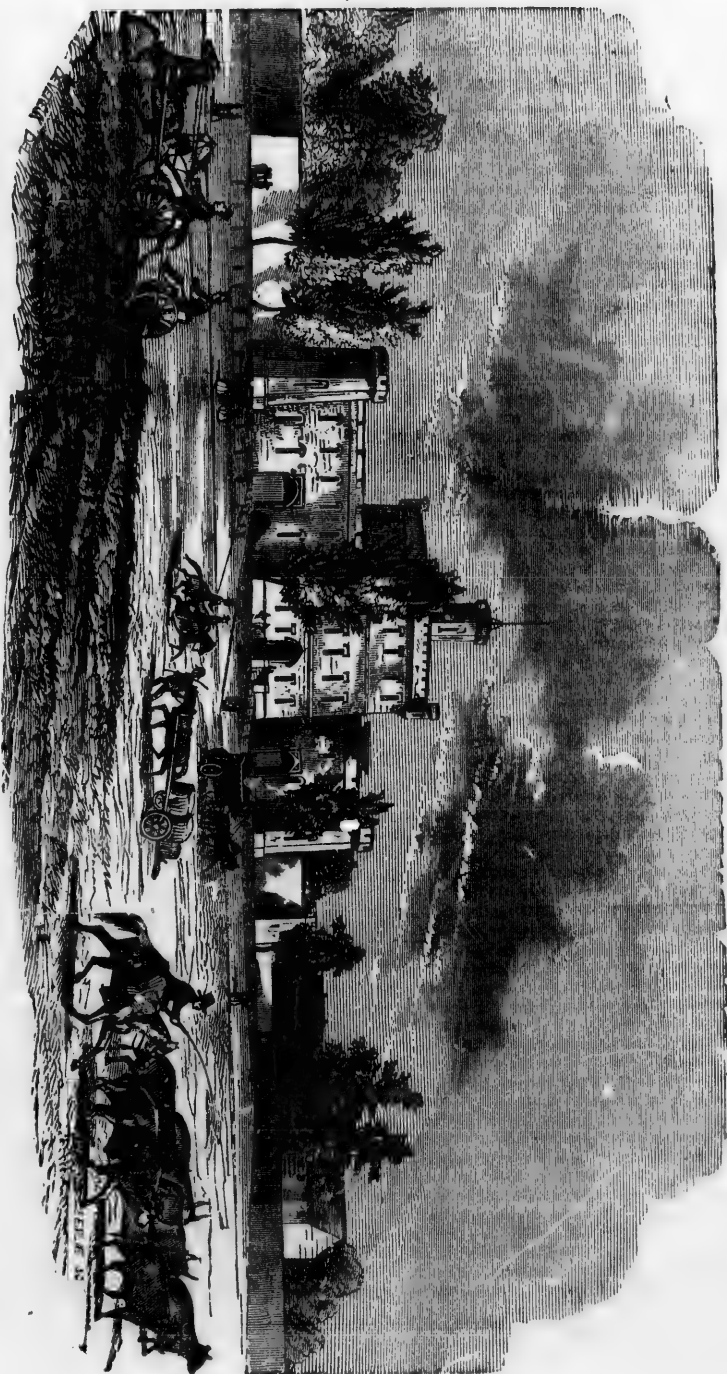
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MERCANTILE BIOGRAPHY.

In presenting to our readers the present article, embracing biographical notices of merchants who have been eminently distinguished for the energy manifested in the pursuit of their various vocations—from the most humble beginnings to the proudest results of human industry—for their public and private virtues, and the influences which they have exerted on the domestic, moral, and political, and intellectual condition of mankind, we would offer a few prefatory remarks.

It has been said, and with truth, that neither the past nor present age has presented a single life from which, if a faithful narrative were written, some valuable information might not be drawn. If such an assertion be tenable, when applied to the recorded actions in the great mass of society, charged with its follies and crimes, how much more forcibly must it apply to the biography, which selects and holds up as mirrors to the world those only whose wisdom and virtue are calculated to make a lasting and beneficial impression; which, while it consecrates the ashes of the dead, rescues from the destructive influence of time all that is worthy of remembrance—presents us with the living characteristics of the man as he stood before a scrutinizing earthly tribunal—enables us to follow him from the dawn of intellect to the termination of an active, well-spent life—to see him triumphing over every obstacle which poverty or misfortune presented to his indomitable mental and physical energies—and finally, to appropriate to ourselves the results of an experience thus presented. In reference to American merchants, these "biographical notices" furnish a supplement to the future history of our country, in which those finer shades of character, most interesting to the community, which are lost in the wide survey and generalizing spirit of the historian, are faithfully and accurately delineated.

As the second commercial country on the globe—with ships navigating every sea and bartering with every nation—our merchants necessarily fill an important station in the world's eye; on their honor, integrity, and energy, depend our national character abroad, and our internal condition at home. A fertile and extensive territory may form the basis of our wealth; but commerce is to its productions what machinery is to the raw material—it fashions, shapes, and sends forth.

It is an historical fact, that Napoleon, when his imperial flag waved over thirty millions of people, derisively designated England as the "nation of shopkeepers." Time, however, with its train of events, taught him to see, in his sad reverses of fortune, when

stripped of his glories—exiled to a solitary rock in the Atlantic—deserted by his followers—a monument of fallen grandeur and defeated ambition—that to the pecuniary sacrifices and the devoted patriotism of the "shopkeepers" he was indebted for that unyielding opposition to his sway by which Great Britain was distinguished, when, by his celebrated decrees and embargoes, he had closed the ports of Europe against her shipping; when monarchs were his puppets, thrones his footstools, and subjected nations the outposts of his military camp. If such were the national consequences attendant on the mercantile character and resources of England, what importance must ultimately attach to them in a country like our own, the shores of which embrace two oceans—the commerce of which already competes with its great rival, in every quarter of the globe—whose extensive lakes are whitened with the sails of inland navigation, and whose railroads form a chain of internal communication which unites the most distant sections of an active population—levelling mountains, extending over rivers, and setting distance and time at defiance?

Taking leave of the influence which the mercantile character exerts upon our external relations, we will now briefly advert to its effect on our physical, moral, and intellectual conditions.

To our merchants we are chiefly indebted for the temples of religion, the halls of benevolence, the marts of commerce, the literary institutions and other splendid edifices which adorn and distinguish our cities. Among which, we might place the Athenæum at Boston, the institutions for the blind, the United States' bank and Girard college at Philadelphia, the Exchange at Baltimore, the Astor house, at New York; and last, though not least, the various mercantile library associations, the proud boast of New York and other cities. Never have nobler monuments been erected to departed worth than these *ten and twenty-thousand-volumed* associations, with their lectures and other great moral influences. They are honorable to the memory of their mercantile founders, whose names are engraven in indelible characters on their portals, and are consecrated in the intelligence, welfare, and happiness of the nation.

New York may safely challenge the world to produce an institution of a similar character, so important in its consequences to a rising and energetic community.

In the midst of the fluctuations of commerce, and the energies necessarily devoted to its steady advancement, it will be seen, that the merchant has not been undistinguished among the moral and religious benefactors

of mankind, nor unmindful of the injunction left by the mild Founder of Christianity to his followers—"Go ye forth into all nations, and preach unto them the gospel of truth." We owe to the benevolence of our mercantile community a great portion of the means raised to support missionaries among the aborigines, while some of its members, unaided, have sent forth the bearers of the gospel mission to the most distant nations of the earth.

The mental and physical endurance which has distinguished the mercantile character, particularly in our own country, is not one of its least extraordinary features; many of its possessors, who now rest from their labors, rose from extreme obscurity—saw their hopes and expectations blasted again and again—yet rising with renewed vigor from every stroke of fortune, eventually succeeded in acquiring an affluent independence; the just reward of their unabated perseverance.

In devoting an article in the present work to mercantile biography, we are influenced by a desire to exhibit the strong points of character which have distinguished the patriarchs of commerce, as furnishing examples to the young merchant of the present and future times, and as a stimulus to the attainment of the enviable distinction which they have acquired.

The sources from which the following notices have been selected are various, and, generally, more contracted than we could have desired. The first name which we present to our readers, is that of

GEORGE CABOT, a distinguished merchant and statesman, born in Salem, Massachusetts, in 1752. He was educated as a merchant, and for several years visited foreign countries as a factor for his father, who was an enterprising and opulent ship-owner. He was considered a young man of talent, and soon after commencing business, he was elected a member of the Massachusetts' provincial congress—of which General Warren was president. The good people of Massachusetts, wishing to alleviate the distresses of the times, proceeded to consider the propriety of fixing a maximum price upon foreign goods. This he opposed, with such strength of reasoning as to prevent any restriction upon commerce.

During the war, he was an active merchant—he, with his brother, having at one period of the contest, twenty privateers of a large class, carrying from sixteen to twenty guns each. These vessels were very successful for four or five years; but the British, toward the close of the war, having lost more than one thousand seven hundred merchantmen, grew wiser, and fitted out a large number of frigates and gun-brigs, that were superior in force to most of our privateers, and a

great portion of them were taken. The Cabots were severe sufferers, losing nearly all their armed ships before the war closed.

When peace was restored to the country, Mr. Cabot was active in bringing the people to see the necessity of forming a sound and permanent general government. With others, he used the public press to enlighten the country upon the great doctrines of civil and political liberty.

He was active in establishing a state constitution for Massachusetts, and afterward, in 1788, was a member of the convention for adopting a constitution for the United States. Soon after the constitution went into operation, he was chosen by the legislature of Massachusetts as a senator in Congress. In 1798, he was appointed, by John Adams, secretary of the navy, but he declined the appointment; yet he took an active part in assisting the government to build and equip a navy. Liberal loans were subscribed by the merchants in every part of the country, and Mr. Cabot was among the foremost. The government, fired at the insults and indignities offered our commerce by France, were so active in building ships-of-war, that a few months were sufficient to take the timber from the forests to construct a sloop-of-war, and a few more days to get it ready for sea.

A respectable force was soon on the ocean, and earned laurels wherever they met the enemy.

During these dark hours of our history, when Hamilton and Ames were full of apprehension for our destinies, Mr. Cabot was laboring with them in opening the eyes of the people, blinded by party feuds. It is said that Ames, always flowing, and sometimes too redundant, consulted Mr. Cabot in regard to his publications, and frequently submitted to his judgment when they differed in opinion.

For many years of the latter part of his life, Mr. Cabot resided in Boston, where he was held in the highest estimation. If there was a matter of mercantile usage to be settled, he was consulted—if there was a misunderstanding between merchants, he was made arbitrator; ay, even if there were an affair of honor to be settled, his opinion was law. In 1815, he was elected from Suffolk county as a member of the Hartford convention, and was made president of that body. Where he was, every one was satisfied that all would be done with decency and correctness, in both manner and principle. He was brave, and discreet as brave. His ambitious days, if ever he had any, were over, and prudence and judgment were, at the time of the Hartford convention, his great characteristics. The person of Mr. Cabot was of the finest cast. He was tall and well proportioned.

His head was a model, for the sculptor. There was a classical expression of the countenance, that made him the object of observation to every stranger. His movements were dignified, and his voice sonorous and commanding. Looking at him, you would say, there is a gentleman; and no one would question the assertion. He was as amiable as excellent; there was no asperity in his nature. He took a broad and noble view of every subject, and uttered his opinions with fearlessness, but with modesty—and his decisions were as oracles. Mr. Cabot died in April, 1823, in the seventy-second year of his age; and enjoyed through that long period, all that philosophy, philanthropy, and religion, could give to life. The civic wreath of such a man should be green for ever.

WILLIAM GRAY, one of the most successful of American merchants, was born in Lynn, in the county of Essex, the commonwealth of Massachusetts, in the year 1751. He came, when quite a boy, to Salem, and was an apprentice, first to Samuel Gardner, Esq., an active merchant, but left him and finished his apprenticeship with Mr. R. Derby, also a business man of that place. Young Gray was an enterprising and indefatigable apprentice, and had acquired the confidence of the principal merchants in Salem when he commenced business for himself, which in that careful and industrious town, was a fine capital to begin upon. Mr. Gray was early prosperous in his affairs, and in less than twenty-five years after he commenced business, was considered and taxed as the wealthiest man in the place, where there were several of the largest fortunes that could be found in the United States. He was all activity, and at times had more than sixty sail of square-rigged vessels. It was a fact that no moderate breeze could blow amiss for him, for every wind of heaven carried for him some vessel to port. For more than fifty years of his life he rose at the dawn of day, and was shaved and dressed before the common hour for others to rise. Being dressed, his letters and papers were spread before him, and every part of his correspondence brought up. He was, at the same moment that he put millions on the adventurous tracks for gain, with the boldest character, careful of all the small concerns of expenditures. This he considered as belonging to the duty of business. He had married, in early life, Miss Chapman, of Marblehead, the daughter of a distinguished lawyer. They had five sons and one daughter. Mrs. Gray was a woman of great powers of mind, well cultivated, and for many years was among the first in the social circle.

During the embargo, Mr. Gray took side with Mr. Jefferson, notwithstanding his inter-

est suffered greatly. His ships were rotting at the wharf. This course brought against him his old friends, and raised up a numerous host of new ones. He now removed to Boston, and was elected lieutenant-governor of the state. He had several times been elected to the state senate, but politics were not his stronghold, and he sunk the great merchant in the common-place politician. His immense wealth was used for the wants of the government, with the liberality and confidence of one who believed that a government should not be poor when individuals were rich. It is doubtful whether any capitalist in the United States did so much for the exigencies of government as Mr. Gray. And while others were speculating on the depreciation of securities, no one will hesitate to say that his exertions were dictated by the patriotism, with only the hopes of an honest remuneration. After the close of the war, he launched again into commerce, but not with his former success. Times had changed, but he had not changed with them and what was a safe calculation once, was not so now; but still there can be no doubt but that he died a rich man, although no public inventory was ever taken of his estate, as his heirs gave bonds to pay debts and legacies—all the law of that state requires. Mrs. Gray died about two years before her husband, and his eldest son since his death. Mr. Gray was happy in his family, and was always a domestic man. He was worn out with the fatigues of business at the age of seventy-four, and departed this life, November 4, 1825.

PHILIP LIVINGSTON descended from a respectable Scotch family, and was born at Albany, the 15th of January, 1716. He was educated at Yale college, and graduated with the class of 1737. He became a merchant in New York after leaving his alma-mater; and as there were but few well-educated merchants in Wall street at that time, he was soon quite at their head, and of course had offices at his command. In 1754, he was an alderman of the city of New York, and after serving in this capacity for four years, was sent to Albany, as a representative of the city. In this body he soon became a leader, and directed its attention to its great interests of commerce; New York being then behind Boston and Philadelphia in her exports and imports. He was one of the committee of correspondence with the agent for the colony in England, the celebrated Edmund Burke; and his letters abound in information and critical remarks. Mr. Livingston was in Congress in 1776, and affixed his name to the declaration of independence, for which he was a strenuous advocate. He was a member of the senate of New York, on the adop-

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tion of the state constitutions; after which, under the provisions of that constitution, he was elected a member of Congress; but he was not long permitted to devote himself to the service of his country, for on the twelfth of June, 1778, he died, with *angina pectoris*, or the dropsy of the chest, often twin-messenger of death. He was a warm and fearless patriot in severe times, when thick clouds enveloped our political horizon.

FRANCIS LEWIS, one of the New York delegation in congress when the declaration of independence was made, was born in Wales, in 1723. He was partly educated in Scotland, and then sent to Westminster, where he became a good classical scholar. In London he became an apprentice to a merchant, with whom he continued until he was of age. He then left England for America with handsome prospects, and set up business in New York. He was agent for the British colonies in 1756, and was taken prisoner and carried to France, from which country, on his exchange, he returned to New York. He was a lover of liberty, and stood foremost among the sons of freedom. In 1775, he was sent a delegate from the provincial congress of New York to the continental congress, and was there when the declaration of independence was made. He continued in that body for several years afterward, and rendered great service as a commercial man. He suffered much for his patriotism, the British having destroyed his property on Long Island. He had, however, the satisfaction of seeing the country prosperous, though he was not. He died on the thirtieth of December, 1813, in the ninetyeth year of his age.

ROBERT MORRIS was a native of England, but came to this country when quite young, and was educated in Philadelphia. After finishing his education, he entered a counting-house, and in a few years became conspicuous as a thorough merchant. When the revolution broke out, Mr. Morris sided with the colonists, and was distinguished as a patriot. He was elected a delegate to the second continental congress, and was in that body in 1776, when the declaration of independence was signed. During the whole war, he was considered the ablest financier in the country, and Washington had recourse to him, when he could not procure anything from Congress. In 1781, Mr. Morris was appointed superintendent of finances, and was, perhaps, the only man in the country fit for the office. He had a most arduous task to perform; it was indeed gigantic, for it involved all the duties of every department of the government, so far as money was concerned. Washington had the highest confidence in him, and Franklin thought him a most wonderful man. He sur-

prised all by his power of raising money for public exigencies, when our credit was under the worst circumstances. He provided Washington with money to carry on his southern campaign against Cornwallis, the defeat of whose army ended the war. He died on the eighth of May, 1806, in the seventy-third year of his age. It may be said of him that he was a great public benefactor.

BENJAMIN PICKMAN was born in Salem in 1740. He was the son of a distinguished merchant in that town, and was graduated at Harvard college, in 1759.

He entered his father's counting-room after leaving college, and soon took a high stand in society.

When the revolutionary war broke out, he was lieutenant-colonel of the Salem regiment, but he had not made up his mind that the time had arrived for the separation of the two countries. He was a friend to his own, but could not come to the doctrine of sudden dismemberment. He went to England under a furlough from the legislature, and there did much good in assisting the unfortunate who were taken prisoners in the first years of the struggle. His wife and family remained in this country until the war closed, and of course his estates were not confiscated. In 1784, he returned to his native land, and was greeted with kindness by his old friends. He again commenced business as a merchant, but in the British spoliations lost no small part of his property. The treaty made by Jay returned him his property, and a fair interest on the same. He now relinquished all business, took his money and invested it in American stocks, and lived on its income—most ample means for his purpose. His table was one of the best in the country. He was classical, delicate in his feelings, and unshaken in his opinions, and every one was satisfied with his hospitable board. His conversation was generally directed to ancient history, or to that of our country. He was at home in either, but made no parade of his learning. He was a man of ordinary talents, and of more than ordinary taste in classical literature. As an antiquary he was second to none; he garnered up all that was curious or strange in his neighborhood, and was ready to give it to the public provided his name could be kept out of sight.

He now placed the enjoyments of his life in ease, and never swerved from his principles. He was blessed with an excellent wife and a delightful family. They were around him and administered to his comforts. He had three sons and two daughters, and all were devoted to his happiness. He rejoiced in the success of all he knew: his heart was full of philanthropy.

His person was noble, his height over six feet, his countenance was quiet, calm, but manly, and hardly bore the ordinary marks of age. In the eighty-first of his age he sunk to sleep, without having suffered many of those pains and aches which mortal man is liable to, in this scene of struggle and anguish.

There were but few men in this world of so good a disposition, fewer still of so much intelligence and refinement, and none of greater purity of character.

WOMAN'S MISSION.

Her mission is peculiar and sublime. There is a work to be done in the material world. The wildness of nature is to be subdued; its barrenness and deformity are to be converted to fertility and beauty. Nature is to be brought more fully in subjection to the purposes of man; but this work rests not on woman. There are new channels of commerce to open, new lines of intercommunication to establish, manufactures to promote, arts to foster, fields of discovery to explore, social systems to reconstruct, and political institutions to regenerate; but the peculiar mission of woman is not here. To all this, her work is what the soul is to the body—what the spirit is to the matter which it animates and informs.

Woman is emphatically and essentially an educator. She operates not on wood and marble, but on mind. She takes it in the first dawning of intelligence and reason, and imparts its first knowledge of objects, and its first impressions of beauty. From her it imbibes not only its earliest, but its most permanent ideas of fitness and truth, of right and obligation. She gives character to all the future being of immortals, by the coloring which she imparts to the fountains of intellectual and moral life. She develops and trains the reason, and awakens and exercises those sensibilities on which all the after-emotions of the soul depend. She has the development and forming of the individual man. She takes him, like the unpolished block, and ceases not her care and toil, till he is wrought up to form, and grace, and symmetry, and strength. There is little in the first appearance of the rude shell to awaken our interest, or to attract our notice; but when placed in the hands of the skilful artificer, it unfolds a brilliant pearl, worthy to deck the bosom of beauty, and to glitter in the crown of empire. So, when we look on humanity in its incipency, there is little in its dull exterior to attract

our attention, or to give impulse to our hope. But there is a gem there, which, when found and polished and exalted, will glitter in the ranks of intelligence, and reflect its light on the perfection and glory of the Creator. And this is a part of woman's mission—to tear from this shell the spiritual gem which is hidden beneath its rude incrustations, and, working it up to its highest excellence, to set it among the brilliants which glow in the diadem of Jehovah's intellectual glory.

The social and political standing and influence of mankind, not less than their intellectual character, are fixed and determined by woman. See that child. There is something more than a smile of innocence, and a form of loveliness. There is a spirit which will grow in intellectual might, and impress its sentiments on the nation; a spirit beneath whose mysterious incantations the ocean of feeling may be lashed to fury; a spirit by whose potency the deep foundations of the social world may be moved. That child is the cradling of a power which may curdle the feelings of humanity to curses, or call out the deep gratitude of its throbbing heart in universal praise. And who is to mould, and give impulse and direction to this tremendous energy? Woman! This is her mission.

Woman is also a reformer. The influence of woman on the order of society is controlling. The influence of a single woman, in her own immediate circle, is only an epitomized expression of the influence of woman, in the aggregate, on the masses of mankind. She wields in society a moral influence which man never can command. Her power makes itself felt, for good or evil, in all the walks of social life. It is wielded, not on the battlefield, nor in the senate: it is as noiseless, but still as pervading, as the light. It steals into all the ramifications of life, and occupies all the recesses of the heart. Woman is the destroyer, or the conservator, of the best interests and highest happiness of social man. One way or the other, her influence must be controlling.

All this we suppose to be generally and clearly admitted truth. And in this view how commanding, how awfully responsible, is the position of woman. Look at the present aspect of society, and see the end toward which this amazing moral power is to be exerted. The spirit of reform, like the breath of God, is beginning to move on the dark and sluggish waters, over which the night of ages has brooded. Mind is awakening from its slumber, and casting away its fetters. Thought is aroused to a living and fearful intensity. Humanity is coming up from the grave in which despotism and ignorance have confined it, tearing off its grave-clothes, and

standing forth in the conscious dignity of liberty and reason.

In all this, the work of woman is conservative. She must be seen and felt in all those movements; not, indeed, in strife and debate, but in those soft and gentle, yet controlling influences which she imposes on mankind. It is hers to allay the effervescences of excitement, and to restrain the lawlessness of passion; to imbue the movement with the mildness of charity, while she fortifies it with the power of principles.

"As she glances around, in the light of her smile,
The war of the passion is hushed, for awhile,
And Discord, content from his fury to cease,
Reposes entranced on the bosom of Peace."

SNOW:

ITS NATURE AND FORMATION.

WHATEVER is commonly before our eyes is usually regarded by us with less attention than it deserves to be. This is the case with snow. We pass it by unaware of its wonderful formation, careless of its very great value, and only aware that it is very white and very cold. But an examination of a flake of snow, with the assistance of a microscope, will show to us that in its structure there are great beauty and great skill. It will show to us, in short, that like all the other works of God, it is exceedingly wonderful.

Where *water* is frozen the product is *ice*; a thick, solid, and slim transparent substance. A comparison between a piece of ice, however small, and a flake of snow, will speedily convince the reader of the very great difference between the substances of which they consist. Whence is that difference? The grand influence which forms ice is the same as that which forms snow. That influence is intense cold. But in the two cases the cold is exerted upon particles in a different state of cohesion. When aqueous particles are closely cohered in the form of water, the influence of intense cold upon them produces a solid and ponderous body; i. e., *ice*. But when this description of particles is dispersed in vapors and greatly rarified, they are changed by intense cold into frozen particles of a less dense coherence. The difference between the density of those particles which, when acted upon by cold yield ice, and those which, exposed to the same influence, yield snow, is this: the latter are just twenty-four times lighter, bulk for bulk, than the former. The particles are only exceedingly rarified as to their bulk; but the bulk also is exceedingly small. So small indeed is it, that one such

particle would present but a very minute object even when viewed with the powerful aid of the microscope.

How, then, the curious reader will exclaim, such being the case, can the mere action of intense cold present to our view large flakes of snow? The process by which this is brought about is, indeed, exceedingly curious; and, therefore, we will give a brief, and, of course, a faint, description of it.

Floating in the upper atmosphere, let the reader imagine that he can see millions of minute drops, or points of vapor. Acted upon by intense cold, each of these drops or points is converted into a solid substance as fine as one of those little motes which we can sometimes see floating in the radiant sunbeams. As these descend lower and lower in the atmosphere they attract each other, and each flake of snow that we see glistening in virgin whiteness upon the ground, consists of a multitude of these minute atoms of frozen matter, cohering together with the most perfect and beautiful uniformity. Surely, when we perceive that even in a flake of snow so much ingenuity and design are perceptibly existent, we ought to keep our attention to surrounding objects perpetually upon the alert. Everything of God's creation, however minute in itself or humble in the uses to which it is destined, is calculated to yield great pleasure to the attentive observer.

It is by an attentive observation of the works of the Almighty that we are the most certainly and effectually led into a truly pious frame of mind. We *can not* pay attention to the innumerable wonders of the natural world without finding ourselves more able and more inclined, with every successive hour, to

"Look through nature up to nature's God."

This, indeed, is the most valuable end of all studies. All the other uses of knowledge have this one great defect, that they are *temporary*. But this great end of our studies is *eternally* useful: making us better fitted for the eternal favor of our Creator.

Even of merely temporal value, the pursuit of natural philosophy is abundantly productive; and youth, who indulge themselves in it, are never at a loss for the most refined amusement; an amusement which instructs as well as delights, and, unlike most other amusements, never clogs and never leaves a sting behind it.

OF THE USES OF SNOW.

It is not merely about the structure of the visible things around us that we are occasionally too incurious; we are but too apt to neglect to make inquiry into their uses. Snow

is one of the many things of usefulness of which men are, in general, apt to make small or no account. Many of even those who do take the trouble to reflect on its effect upon the ground, form a very incorrect notion of it. Judging from its own nature and appearance, these persons infer that snow must necessarily be injurious to the earth, by reason of its dampness and intense cold. The reverse of this is what actually takes place.

The thick covering of snow which lies upon the ground in winter, is so far from making the earth cold, that it, in truth, preserves it from being so. Were the dry earth exposed to the action of the bitter and piercing winds of winter, it would be utterly deprived of that genial warmth, without which the seed sown within it could not germinate. It is by the close and flaky covering of the shining snow that a remnant of genial heat is preserved in the bosom of the earth. In vain do the piercing winds howl above; they can not penetrate that mantle with which God has clothed the face of nature.

Some well-meaning, but mistaken writers, have essayed to prove, that snow has a chymical as well as a mechanical efficacy. They have imagined, and endeavored to prove, that it not only preserves to the earth that portion of warmth which is absolutely necessary to the process of germination, but also fertilizes it. As a covering, protecting the earth from the sharp winds, snow is useful indeed; as a manure, it is utterly without virtue. It was not intended for a manure; and experiment has put it beyond doubt or question, that of the peculiar property which has been attributed to it, it does not possess one particle more than common rain-water.

The class of writers to whom we have alluded, have supposed that snow possesses a large proportion of nitrous salts. If it did possess these, it would undoubtedly tend to fertilize the earth: but it does not possess them. The aqueous particles were supposed to acquire these salts in the process of being frozen; but elaborate and well-conducted experiments have shown that although rain-water and snow contain a quantity of calcareous earth, and a very small quantity of nitrous and muriatic acids, the rain-water has, in fact, the larger portion of the two. And even the rain has them in such an exceedingly small proportion, that it can not by any possibility derive any fertilizing virtue from them.

We need not go out of the way to exaggerate the usefulness of the creations of God. They have in reality such abundant, and in most cases such palpable usefulness, that to admire them it is only necessary that we diligently and curiously observe them.

Observation of the appearances of nature

leads us, almost insensibly, to moral reflection. How dreary is the uniformity and bleakness of the appearance of nature in winter! We can not look abroad without feeling a sense of chilliness; and we could almost imagine that our own fireside has less than usual of its warm and cheerful influence. We regret at our temporary privation of the fruits and the pleasant scenery of summer; and even exclaim against the uncouth and rugged aspect of the winter. And yet, were it not for the preserving power of that snow, whose dazzling uniformity offends us so much, we should look in vain for the rich fruits and verdant scenes of the gay summer. The seeds and the tender plants would be utterly destroyed, and we should not only be without the beauty of summer, but also without food. The golden harvest, which is so dear to us, would not wave in beautiful luxuriance, had not the dreary snow been wrapt as a mantle round the earth during the chill season of winter.

Even so is it with our moral nature. We are plunged into the midst of difficulties and dangers—we look abroad, and all is dreary, dark, and threatening. Short-sighted and of little faith, we are ready upon the moment to exclaim that we are deserted and must perish. Time flies on, our prospects brighten, and our difficulties and dangers vanish before us. We look back with calm and undeluded minds upon the past, and discover that those very circumstances which most strongly excited our distrust and discontent, were the means of our preservation.

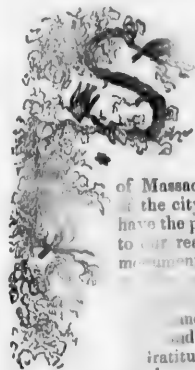
Due reflection in this way will never fail to afford us comfort and fortitude in the midst of all difficulties, however immense and seemingly unavoidable. We shall learn to consider our misfortunes and perplexities as a *moral winter*. We may look with some annoyance, indeed, upon the dreary and comfortless prospect around us, but we shall reflect that a brighter season will ere long shine upon us. We shall long, indeed, for the lovely spring-time, and the glorious summer; but we shall not the less feel the necessity of our enduring these wintry rigors so essential to perfecting the works of those more genial seasons.

We shall thus, even in our sorrows and our sufferings, create a source of rejoicing; present privations will give us hope of future enjoyment, and the most imminent dangers will seem to be but a rugged pathway to security and peace. In a word, we shall learn to rely with pious constancy upon Him who can make all things work together for our good; and we shall find both profit and comfort in the habit which we shall insensibly acquire of believing and hoping that

"Whatever is, is best."

THE WINTHROP MONUMENT.

HONOR TO WINTHROP. OR IS DUE.



SEVERAL articles having lately appeared in our public journals on the subject of erecting a suitable tomb to the memory of JOHN WINTHROP, the first governor of Massachusetts, and founder of the city of Boston, we now have the pleasure of presenting to our readers an appropriate monumental design, conceiving a suitable mode of calling attention more directly and effectually to this and praiseworthy object. Gratitude for eminent service, honor to piety and virtue, admiration for lofty genius, impelled by noble aims, are among the best traits of the human character. As education is the chief defence of well-governed nations, and the sure though slow corrector of political abuses and public wrongs, so are manifestations of general esteem and gratitude for those who have nobly served their country or race, the fittest and truest earthly reward of their well-doing, and the cheapest incentive to lives of unbending integrity and enduring patriotism. As it is the ordinance of Heaven, that the virtues of men should survive them, in a grateful and purifying influence, so it is alike due to the memory of the great and good who are gone, and to the best interests of those who come after them, that those who have known their worth and devotion to the public good should embody in an enduring monument those recollections, so that when the eye of the citizen or traveller beholds it, his pulse may beat with a quicker vibration.

There is in the neighborhood of Lucerne, in Switzerland, carved in high relief, upon the vertical face of an immense rock among the mountains, a colossal lion, pierced by a lance, and dying upon a shield. It was sculptured there in honor of the memory of those intrepid Swiss who, on the 10th of August, 1792, sealed with their lives their devotion to the unfortunate king of France. It is the noblest tribute to the virtue of fidelity which the world can show. We doubt not that many a failing purpose to do well has been strengthened, many a wavering resolution confirmed, by the sight of this glorious monument, and new vows made by the beholder to fulfil with unflinching zeal his duties to his country. Its eloquence

must be irresistible—its silent language must do more than the words of poet or orator.

It would be an act of treason to posterity, if no permanent record of WINTHROP should go down to them. In this venerated man, whose virtues we wish here to perpetuate, we behold no mere mediocrity, either of intelligence or virtue. He lived emphatically for THE FUTURE. It was his bright ambition to do good to others—to advance the cause of benevolence, of science, of mercy, of religion. Living in ease, comfort, and abundance, in the country of his birth, Mr. WINTHROP cheerfully renounced all these at an advanced period of life, and embarked his fortune in the arduous attempt to settle a people on the distant shores of a new world. Of ardent temperament, with a well-stored and cultivated mind, and possessing in no ordinary degree those estimable qualities that endear man to his fellow-man, he was well suited to conduct and manage a rising community, such as that over which he presided, and to establish among its members that love of order and deference to authority, which have ever been the characteristics of the New England states. Accordingly, we find him elected to be the first governor of Massachusetts; to which distinguished station, with the intermission of a few years, he was re-elected to the period of his death, which occurred in 1649. The influence of his stern, simple-hearted faith, makes at this day a broad, deep mark on the character of the whole American people.*

Whether we view Governor WINTHROP individually, in the discharge of his public duties, in the private and domestic relations of life, or in a more extended sense, as connected with a momentous epoch in the history of his country, he is eminently deserving of some public and lasting record of his usefulness and virtue—one befitting the wealth and intelligence of the capital of the state in which his ashes repose, and expressive of the estimation in which his memory is held by the descendants of those who lived under his equitable rule. And this is rendered more necessary, when we reflect upon the remarkable and stirring scenes with which he was con-

* TRIBUTE TO NEW ENGLAND.—Mr. Calhoun, in his letter to the New England Society committee at Washington, declining an invitation to their dinner on the 23d December, takes occasion to say: "By what causes has so inconsiderable a beginning, under such formidable, and apparently almost insurmountable difficulties, resulted, in so brief a period, in such mighty consequences? They are to be found in the high moral and intellectual qualities of the pilgrims: their faith, piety, and confident trust in a superintending Providence; their stern virtues; their patriotic love of liberty and order; their devotion to learning; and their indomitable courage and perseverance. These are the causes which surmounted every obstacle, and which have led to such mighty results."

nected, forming a striking feature in American history—a sort of starting-point, from which to date the commencement of our subsequent greatness—and whose results continue to affect the world at large, by opening up a wide field for industry and enterprise, and offering an asylum to the oppressed and destitute of other lands. It ought never to be forgotten, that the sons of the pilgrims were the founders and pillars of our republic, and formed the first gallant band who, midst the conflict of party feeling, or the despondency of national misfortune, staked their happiness, life, and honor, for the political regeneration and independent existence of our country; and, by their united wisdom and experience, became the instruments, in the hands of an overruling Providence, of fixing the destiny of this nation. There is a secret pleasure and satisfaction in thus tracing the fountain to its source—in recalling to mind the times and scenes when those plans were first suggested and carried out that have elevated us into the enjoyment of that freedom whose effects have been, and still continue to be, a rapid career of greatness and glory, the increasing admiration of the civilized world.*

* Christianity started the human mind on its present career of independent inquiry, activity, and progress. Teaching every man that to his own master he standeth or falleth, imposing on him a responsibility which eternity alone measures, and which he can not divide with another, it necessarily throws him off from proscription to think and act for himself. Never has Christianity penetrated a country, nor a cottage, nor a cabin, without awakening the mind to earnest thought and drawing out its energies to earnest action. The Protestant Reformation is an instance on a large scale. It was then that Christianity stood over the grave of free inquiry, as Jesus at the grave of Lazarus, and cried, "Come forth." Forth came that spirit, and the grave-clothes of superstition were cast away. She has gone abroad no more to die; she has roused men to action; she has ripped up old errors; she has torn away abuses; she has dug up buried truths; she has multiplied inventions, increased wealth, diffused comforts; she has changed the face of the world. Though she has often forgotten and sometimes stabbed the benefactor that raised her from the grave, and allying herself with the selfish and the devilish, has committed excesses at which Christianity weeps, yet it was Christianity that started her career, and that ever is striving to restrain it, that it may be only a career of blessing. It is a singular fact, commented on by Guizot, that, at the very time when, in the church, the spirit of free inquiry was going forth, in the state, power was rapidly concentrating in the monarch. But the freedom of inquiry awakened by Christianity, could not long exist without being brought to act on the state. And history shows, in quick succession, English Puritanism, the settlement of New England, the English revolution, the American revolution—all results of the collision of mind freed by Christianity, with the growing despotism of the state.

Thus, not the Puritans alone, to whose influence in advancing liberty, even Hume testifies, but in all the history of Christendom, the church has been ahead of the state, and taken the lead in its progress; it has occasioned the opposition to tyranny which has

Perhaps there is no quality of the mind so little developed among us as that of *veneration*. We pay a passing tribute, it is true, to the hero of the hour—we bow before the rising sun, and mingle our shouts with the huzzas of the crowd; but there our homage ceases—the heart is not affected. We honor the pageant of a day; but our gratitude would seem to be the offspring rather of favors hoped for, than of those received, and to end with the power to benefit. We can hardly over-estimate the beneficial influence of the *MONUMENTAL ART* upon the general character of a people like ourselves. It would bring before us in our daily walks the idea of *country* in a visible shape. It would impersonate her to us as a kind mother, as a being to love and honor—to live for, to die for. But few are the monuments raised by public feeling over the remains of public benefactors. Few are the permanent memorials of the people to great and good men departed. Even Boston, the model city of New England, is in this respect deficient. We have no king, no court, no imposing forms and ceremonies to serve as external signs. We need something tangible to cling to and rally around—the *outward types and symbols afforded by monumental art*. When these become scattered throughout our country, they will, like so many missionaries, preach perpetual sermons of patriotism, beauty, and taste, and sow seeds which will spring up and bear fruit a hundred-fold, through the length and breadth of the land. There are unwrought mines of wealth in the human soul, and in none more richly than in the minds of our own countrymen: they lie

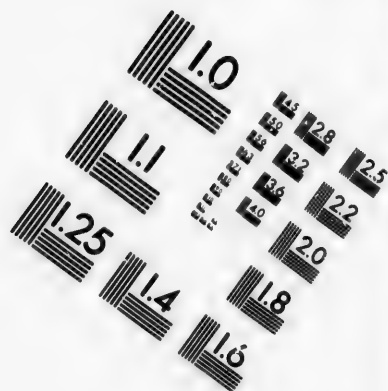
specially marked the last two hundred years; it has originated and in some respects to a degree guided the career of activity to which with such almost fearful energy, the human mind is now roused.

Christianity alone infused into popular progress the sublime element of the rights of man—rights belonging to man, not by grant of rulers, nor by accident of birth, or wealth, or nature; but belonging to him as *man*. Tory journalists of the old world still deny that there are any such things as inalienable rights; that there is any equality of man. But these are realities. Their foundation and their only foundation is the teaching of the gospel, *Honor all men*, the grand gospel doctrine of the brotherhood of man. They have no meaning except as derived from the gospel, which teaches that we are all the offspring of one Father, subjects of one law, fallen under one condemnation, redeemed by the same Savior, equally bound to love all as ourselves, and destined alike to the same judgment. Our declaration of independence, so far as it teaches the equal rights of man, is but an application to civil affairs of that principle of universal love which Christ taught. The idea in question and kindred sentiments have become popular of late. Demagogues and infidels love to carp on them. The fact shows how powerful is the hold which they at last have gained on the human mind. But let them who use them know that these sentiments are the creatures of eternity, the gift of Christianity to man.

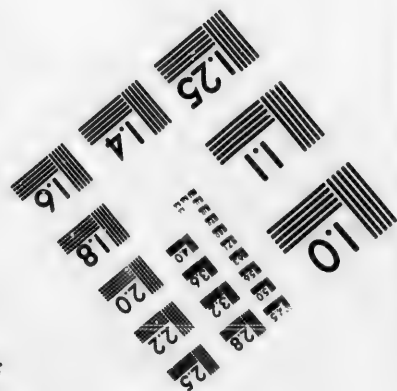
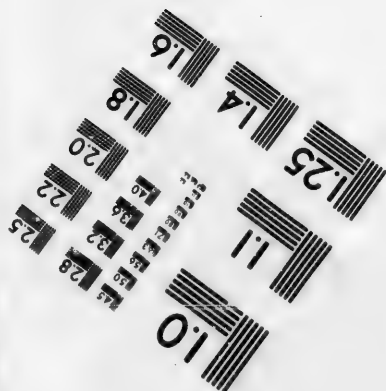
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hidden. Little, however, will have been accomplished, till "the general taste and skill shall have arisen to that mediocrity which is the first step in useful progress, and which forms a vantage-ground where genius may plume itself with a nobler emulation, and stretch its wings for the highest heaven of invention of ideal beauty and imitative perfection."*

In the Chapel burying-ground in Tremont street, Boston, in a single and humble tomb, the dust of the WINTHROPS and that of the SEARSES have long mingled in obscurity. It is not to be supposed for a moment, however, that the absence of such a memento to departed usefulness, as is here suggested, arises from any want of inclination or pecuniary ability, on the part of the relatives of this celebrated man. The two surviving heads of the family—the Hon. ROBERT C. WINTHROP and the Hon. DAVID SEARS—we know have always been ready, and have seriously thought, of raising a suitable monument near the spot hallowed by containing all that is mortal of their ancestors, and particularly over the remains of JOHN WINTHROP, first governor of Massachusetts, and founder of the city of Boston; but they have been withheld from doing so, in the belief that, if done at all, it should be done by the public. They feel assured that the recollection of one who possessed a people's love, should be transmitted to posterity by a people's gratitude, and that any interference on their part might be deemed an assumption at once indelicate and ostentatious. Nor would there be any lack of means on behalf of the community; for we are convinced, that the mere concentration of the public mind on the proposed object would not only procure a tender of ample funds; "but," to use the language of a late writer on the

* INFLUENCE OF THE FINE ARTS.—Wherever the arts are cultivated with success, they almost imperceptibly educate the general taste, and make politeness of mind keep pace with refinement of manners. They are to a highly commercial and opulent state of society, what chivalry was to the feudal system; they wear down its asperities, correct the selfishness of its action, enliven the dullness of its repose, and mitigate the fierceness of its enjoyments. Where the arts are well understood, fashion can not be so monstrous or fantastic as where they exert no salutary dominion over the fond love of variety. The source of excellence in art being a judicious observation of nature, and a right perception of her principles of beauty and symmetry, a closer adherence to nature will mark the fashions of society polished by their ascendancy than can distinguish the habits of people without the sphere of their influence. Hence the barbaric nations, where there is much wealth, never expend it in such a way as proves they have any notion of the pleasures of refinement. They endeavor to attract admiration through the vulgar passion of adornment, which is in a moment excited, and as suddenly expires, rather than create a rational respect by consulting for the praise of enlightened opinion.

subject, "to render the expression of public sentiment as diffuse as is desirable, the amount of individual subscription would require to be restricted."

We are a young and rapidly-growing country—the world's hope and expectation. Our ancestors conquered the hardships of the wilderness, and posterity will demand of us, their descendants, to make it bloom and blossom, by introducing into it the refinements of social life, and the elevated thoughts and principles of a religious and patriotic people. For the first enough has been done, for the second much remains yet to do, and no measure will advance the object more than to HONOR THE DEAD.*

* "But I will say a word on the effect of art on national feeling. Some one has said, 'Give me the writing of the songs of a country, and you may make its laws.' I had almost said, 'Give me the control of the art of a country, and you may have the management of its administrations.' There can be no greater folly than that committed by our statesmen, when they treat art and literature as something quite aside from great national interests. The tariff, internal improvements, banks, political speeches, and party measures, are put paramount to them, and yet they all together do not so educate the soul of the nation. They affect simply its food and clothing, and money, and offices. In the days of Italian glory, artists and poets were the companions of kings, and kings were honored by the companionship. They were fostered not more from taste than from self-interest. Art is too often looked upon as an abstract thing, designed only for men of taste and leisure. The painting or statue which is the embodiment of the ideal perfect in the artist may be so, but there are other more useful departments of art not to be overlooked. Every great national painting of a battle-field, or great composition, illustrating some event in our history—every engraving, lithograph, and wood-cut, appealing to national feeling and rousing national sentiment—is the work of art; and who can calculate the effect of all these on the minds of our youth? Pictures are more powerful than speeches. Suppose that every painting and engraving, whether rude or complete, every monument to human worth, were removed from this country for the next forty years—what would be the effect on the national taste and feeling? And yet for all that our statesmen involuntarily do for these things, such a burial would take place. They show themselves but half acquainted with the true resources of the nation when they overlook or neglect its genius and refined talent. Patriotism, that noblest of sentiments, for it is a sentiment as well as a principle, and governs more in that capacity than in the other, is kept alive by art more than by all the political speeches of the land. I should like to see the Massachusetts' army that would retreat out of the shadow of Bunker Hill Monument before a foreign foe. Were it necessary in some great crisis of our country's fate, to move an audience like this to some heroic resolution demanding peril, and perhaps death—if speech should fail to do it, I would ask only for the canvass to unroll before you, on which was sung, with an artist's hand, the battle of Bunker Hill. I would point to that little redoubt on the crest of the hill, curtained in with the smoke of battle—to the shattered columns breaking down the slope—to the flames of burning Charlestown, shooting toward heaven—without one word. The artist should speak, and he were a slave that could resist his appeal. Could a man be a coward, fighting in the shadow of

How shall we reward great public services? We have no titles of nobility—no legions of honor. Our pension-lists are restricted—our offices must be filled in rotation by swarms of greedy partisans. And these gifts, even if we could confer them, would be inadequate and unacceptable compensations to generous minds. No—like the Romans and the Greeks, let us erect monuments and statues, in marble and in bronze, to the memory of those whose fame shall remain bright and untarnished to distant ages. The hope of being thus honored would prove a fitting stimulus, a sufficient consolation, to many a lofty soul. Many a true-hearted patriot, who trusts the vindication of his career to succeeding ages, and treads with unflinching footsteps the path of duty, reviled by his enemies, doubted, mistaken by his friends, would die content, if he should see with prophetic vision the mists of prejudice and error dispersed, and the noblest monument that art can dedicate to his name, shining in the serene light of future years.

The fatherland has in this set us a noble example. There is not a county, hardly a town, in Old England, which is not dignified by a column, an obelisk, or a tablet, in mem-

ory of its illustrious men. There is not a college or charitable institution which is not adorned with the portraits of its patrons. Veneration is the distinctive characteristic of her people, and has tended, perhaps, as much as any other quality to make them what they are—a wise, a powerful, and a polished nation. Chivalric and noble sentiments are naturally associated with permanent monuments raised by the enthusiasm and gratitude of a community to the heroism or philanthropy of its distinguished citizens. Old men feel a pride in narrating the noble deeds of the illustrious dead, and pointing them out as examples to their hearers. Young men listen with respect, and promise to emulate their goodness; and children catch and adopt the thoughts and feelings of their fathers. Thus a public sentiment is formed, which, while it graces and adorns the individual, gives dignity and honor to the nation. The tower-capped hills of England, her castles, her cathedrals, and Westminster abbey, have undoubtedly had their influence, and operated as powerful agents in modelling her character and stamping the features of her people. And be it remembered, it is not to her great captains and naval heroes alone that she raises

a monument to Washington? What American soldier would retire from such a spot, if compelled to retire before a superior force, with the countenance of Washington looking mournfully down on him, without his heart breaking within him? The moral power of example is stronger than numbers. England understands how much national pride and patriotism are kept alive by paintings of her great events and monuments raised over her dead heroes. I have seen the duke of Wellington spurring his steed by his own colossal statue, melted from the cannon he himself took in battle, reared to him by a grateful country before he died. London has her Trafalgar Square, and a glorious monument to Nelson. Even André has a monument in St. Paul's cathedral. Whenever an English patriot falls, England calls on art to come and consecrate the spot. So does France; so has Italy in all ages. Kings and statesmen have understood how much national existence depends on national pride and patriotism, and how much also those depend on monuments and mementos of her great dead. The palace of Versailles is filled with paintings of Bonaparte's great battles. I once saw a young painter in the kingdom of Sardinia who had suffered imprisonment for painting one of the struggles of the Genoese republic for freedom. All the fury and excitement of a headlong fight between the people and the government were thrown upon the canvases, recalling the days of Spinola. The painting was seized and locked up, and the young artist imprisoned. What was the matter? Art, which is ever on the side of liberty, had come up with her silent, yet strong appeal to the popular feeling. Every stroke of young Isola's brush was a bugle note, summoning the spirit of freedom from its grave, and calling on it to rise and seize its ancient heritage. The youth of every land are educated more by art than by speeches. Let monuments rise from Concord, Lexington, Bennington, Ticonderoga, Yorktown, and Plattsburgh, and Chippewa, and Lundy's Lane, and New Orleans, and as the rail-car flies over the coun-

try, let these records of our struggles and our victories come and go on the hasty traveller, and noble thoughts and purposes will mingle in the headlong excitement after gain. Let the statues of the signers of the declaration of independence line Pennsylvania avenue, and he who walks between them to the capitol will be a better man and better patriot? Let great paintings, illustrating our chequered, yet most instructive history, fill our public galleries, and when the country wants martyrs they will be ready. But, alas! I am speaking of what ought to be, and not of what is. I have been appealing, also, to the self-interest of the nation, when I ought to have been speaking of the claims on a nation's gratitude. To outward eyes America is the most ungrateful country on the face of the earth. The nation has never yet reared a monument to its father, founder, and savior—WASHINGTON. I have seen a chapel reared to William Tell on the spot where he sent the arrow through the tyrant's heart; and a monument to Winkler, who gathered the spears of the enemy into his body, to make an opening through which liberty might strike. The countries of the old world are covered with paintings and monuments to those who fell in a less worthy cause than freedom. But where are the monuments to Allen, and Starke, and Putnam, and Warren, and Perry, and McDonough, and Decatur, and Jackson, and Lawrence? Young Hale was sent as a spy by Washington into the enemy's camp. Being discovered, he was hung on a gallows, and met his fate with the lofty enthusiasm and courage of a Spartan hero. He laid down his young life, without a murmur, for his country. But who can tell where he sleeps? His country, in her hour of darkness and bitter need, asked for his life, and he gave it without a sigh, and now that country dishonors his grave. Yet André has a monument in the heart of the British empire! . . . Who would wish to die for a country that treats its martyrs so? —Extract from a speech of the Rev. J. T. Headley, before the American Art Union.

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her pyramids of honor; but she delights to award the same distinction to her statesmen, her philanthropists, her literati—showing the progress of the age in its estimate of the elements of greatness. Such mindmarks can not be mistaken; no eye so heavy as not to see them—no head so dull as not to understand them—no heart so cold as not to be moved by them. They are the best history for the people—written in the plainest language.

And what have the Anglo-Saxons of America—the proud descendants of this mighty people—to show of such a history? Almost nothing. BUNKER HILL rears its granite form in nearly solitary splendor; and here and there is found a statue of WASHINGTON, and, perhaps, at remote distances, a monument or a ruin may attest a victory or a death—but beyond these, *the people have made no record.*

Historians and chronologists have registered facts and dates, but the sovereign will is still silent or the actors. It has neither conferred a dignity nor accorded an evidence of merit. This should no longer be. If to put in action

the incentives to noble deeds, to moral excellence, and to love of country, be desirable or useful, then *honor the dead.* Raise monuments to the great and good, and show to the living that patriotic deeds never die in the hearts of the people. And who more honorable to begin with than the founder of the city of Boston, and the first governor of Massachusetts? Or what name more distinguished can Boston boast of, or one more worthy of a place in *the people's record*, than that of WINTHROP?

NOTE.—The following fact has been communicated to us by one of the family, and may be safely relied upon: Colonel Stephen Winthrop, the son of the first governor of Massachusetts, was colonel in the guards of Oliver Cromwell. He was appointed (though not commissioned) as general, to succeed Major-General Harrison; and was also a member of parliament. By his will, he bequeathed £100 sterling, to the town of Boston, in New England, on condition "that the town would erect a suitable monument to the memory of his beloved parent." We believe no action was ever taken by the town on the subject, nor any acknowledgment given of the receipt of the bequest.



First Settlement of Boston.

LANDING OF WINTHROP AT SALEM, AND SETTLEMENT OF BOSTON.

In tracing the history of the early settlers of this country, what a source of pleasant reflection we have, in the fact that our ancestors, in coming here, were not allured by the golden dreams of avarice, or by the glowing descriptions of the luxuriance of the soil, abounding in perpetual fruits and flowers—an earthly paradise, teeming with all that could satisfy the appetite, or regale the senses; nor were they, like some colonists, disgorged from the mother-country, to keep the remaining population sound and pure—a surplus mass thrown off to prevent national apoplexy, or political spasm—such a population as sometimes went from Attica to take possession of the islands in the numerous seas about them, or to the more distant shores of Africa; nor were they sent by the parent-country to gain a footing near or on the territories of other nations. No! a loftier sentiment, a nobler spirit of enterprise, filled their bosoms, and induced them to abandon the comforts, the luxuries of civilized life, traverse three thousand miles of ocean, and plant their standard on the wild shores of this western world. The sober calculations of forming a thrifty settlement which should be a home for themselves and their descendants, where they could enjoy a perfect freedom in thought and speech, and worship God according to the dictates of their own consciences, impelled most of the early emigrants to these shores.

"They sought not gold, nor guilty ease,
Upon this rock-bound shore—
They left such priceless toys as these,
To minds that loved them more.
They sought to breathe a freer air,
To worship God unchained,
They welcomed pain and danger here,
Where rights like these were gained."

They were fully sensible of their situation. They could not anticipate all the occurrences which might happen in their destinies, but they were determined to commence upon the broad principle, that knowledge and virtue are the pillars of power and security in every national code. They saw physical means about them for an almost interminable increase of population. The sea was on one side, and boundless forests on the other. Navigable rivers were flowing into the oceans. Nothing but a thinly-scattered race of rude men stood in their way to the founding of an empire larger than the world had ever seen. Nature seemed to have waited from her birth until this hour for their coming, to give them possession of her bounties. This was the place for contemplation, and the place to originate a new course of thoughts upon

political and civil liberty. There were in these retreats no shouts of the conqueror, no moans of the conquered; the time resembled the cool of the evening, and the place the abode of innocence, when and where other beings were at rest, and God walked with man in his primeval state. Everything, in America, was to be begun, and everything seemed to depend upon themselves; with this happy difference, however, between us and those in paradise, for our safety and happiness were to depend upon eating freely of the tree of knowledge, which was forbidden to him who first sprang from the dust of the earth. Here was offered the opportunity to cultivate the mind without the trammels and fetters which embarrass and blind those born in aged and decaying communities. Here plains, and vales, and hills, offered opportunities for all the experiments of agriculture. No agrarian law was needed to give men an equality; there was one passed already by nature without stint. The sites for cities were unoccupied; and they exercised their judgments upon the subject of a proper place to build them, without statutes or restraints. The political compact was to be formed and altered as the covenanters could agree; for there was no other lawgiver than their own understandings, no Solons but their own wisdom, no Lycurguses but the severe discussions of their own judgments. There was no syren to allure them from their duties to the rocks on which they might sleep until their locks of strength were shorn. There were no beds of flowers beneath which the serpent's flattery and fashion might glide to wound their naked feet with sharp stings. Indolence to them would have been death; and labor, that supposed curse on man, was a blessing. Thus stripped of every shackle, they began their work of founding an empire. By the lights emitted from their minds shall we trace the path they pursued, and the deeds they performed. The light of the sun passes away with the going down of the same; but the accumulated light of successive ages of intellect, like the precious stones which adorn the city of God, chases away all darkness, and beams in eternal splendor.*

* The following lines, from the North American Review, are so truthful and beautiful a tribute to the virtues of the "early founders of the republic," that we can not resist the inclination to give them a place in this connexion:—

"The Puritans—there is a charm in that word which will never be lost on a New England ear. It is closely associated with all that is great in New-England history. It is hallowed by a thousand memories of obstacles overthrown, of dangers nobly braved, of sufferings unshrinkingly borne, in the service of freedom and religion. It kindles at once the pride of ancestry, and inspires the deepest feelings of national veneration. It points to examples of valor in all its modes of manifestation—in the hall of de-

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Landing of Governor Winthrop at Salem, 1630.



Among the names of the pioneers in the settlement of this western world, pre-eminently stands that of JOHN WINTHROP, the first governor of the colony of Massachusetts bay, to the memory of whose transcendent worth and self-sacrificing patriotism the Monument, the subject of the previous article, is proposed to be erected. Previous to the emigration to America under Governor Winthrop, attempts had been made to settle the country about the Massachusetts bay, but which succeeded to a very limited extent. The emigrants were comparatively few in numbers, and were intended more for the advantage of the fisheries and the fur trade, than for the purposes of permanent settlement. And most of them had either returned to England, or perished through the hardships encountered, or from disease incident to the climate of a wild, uncultivated region; and a small number of colonists at Salem,* and here and there an isolated family, without any effective organization, were all that remained of them. But in 1630, the Massachusetts Bay Company, under the direction of John Winthrop, obtained from Charles I. a confirmation of their patent previously obtained from the council of Plymouth, granting them all the territory extending in length from three miles north of the Merrimac river, to three miles south of Charles river, and in breadth, from the Atlantic to the Southern ocean. Preparations were immediately made for the transportation to this new world, of a body of emigrants, whose numbers, determined character, and moral and intellectual worth, should insure the permanence, on the field of battle, before the tribunal of power, at the martyr's stake. It is a name which will never die out of New-England hearts. Wherever virtue resists temptation, wherever men meet death for religion's sake, wherever the gilded baseness of the world stands abashed before conscientious principle, there will be the spirit of the Puritans. They have left deep and broad marks of their influence on human society. Their children, in all times, will rise up and call them blessed. A thousand witnesses of their courage, their industry, their sagacity, their invincible perseverance in well-doing, their love of free institutions, their respect for justice, their hatred of wrong, are all around us, and bear grateful evidence daily to their memory. We can not forget them, even if we had sufficient baseness to wish it. Every spot of New-England earth has a story to tell of them; every cherished institution of New-England society bears the print of their minds. The strongest element of New-England character has been transmitted with their blood. So intense is our sense of affiliation with their nature, that we speak of them universally as our 'fathers.' And though their fame everywhere else were weighed down with calumny and hatred, though the principles for which they contended, and the noble deeds they performed, should become the scoff of sycophants and oppressors, and be blackened by the smooth falsehoods of the selfish and the cold, there never will be wanting hearts in New-England to kindle at their virtues, nor tongues and pens to vindicate their name."

* Salem contained but seven houses in 1630.

ment settlement of the colony. The success of their efforts was commensurate with their design. A nobler body of men than enlisted in this enterprise, under the lead of Winthrop, never left their native soil to colonize a new land. Among them were many persons of wealth and distinguished reputation, and members of illustrious and noble families.* Previous to leaving England, JOHN WINTHROP was chosen governor, and Thomas Dudley deputy-governor. These, with eighteen assistants, appointed at the same time, and the body of the freemen who should settle in the new province, were to constitute a legislative and executive body in which all the rights of the colony were vested. On March 29, 1630, they sailed from Southampton, and, after a pleasant voyage, arrived in the harbor of Salem on the 14th of June. It had been their design to make Salem their principal settlement. But on landing there, Governor Winthrop and most of his party were not pleased with its situation; and after a brief period of rest from the fatigues of the voyage, they commenced a tour of exploration through the country, in search of more desirable locations. The engraving on the opposite page illustrates the manner of their travelling through the then pathless wilderness.

They established themselves in places about the bay, as their inclination or judgment directed them, and thus laid the foundations of Charlestown, Watertown, Dorchester, Roxbury, and other towns, now forming the suburbs of Boston. Governor Winthrop and a material portion of his company, first settled at Charlestown, on the north side of Charles river. Their first meeting for public worship was held under a tree. On the 30th of July the foundation of the first church in the settlement was laid at Charlestown,—and preparations were being made for the erection of a house for the residence of the governor. But they soon began to feel the want of good water, for as yet nothing but a brackish spring, near the seashore, had been discovered. The weather had become oppressively hot, and many were taken sick. The colonists, as a consequence, were becoming dissatisfied with the place, and several of them went in search of a better location. A fine spring of pure water was discovered on the peninsula on the opposite side of the river, and a party of the

* "What must we think," says Hutchinson, "of persons of rank and good circumstances in life, bidding a final adieu to all the conveniences and delights of England, their native country, and exposing themselves, their wives and children, to inevitable hardships and suffering, in a long voyage across the Atlantic, to land upon a most inhospitable shore, destitute of any kind of building to secure them from the inclemency of the weather, and deprived of most sorts of food to which they had been always used at their former home!"—*Chronicles of Massachusetts*.

colony. The success was incommensurate with their number of men than enlisted under the lead of Winthrop, to colonize a new settlement. There were many persons of high reputation, and memorable families.* Prelate, JOHN WINTHROP and Thomas Dudley came, with eighteen associates, at the same time, and they should settle in the Massachusetts, to constitute a legislative body which all the rights of the colony. On March 29, 1630, Winthrop, and, after a short stay in the harbor of Salem. It had been their intention to settle at their principal settlement, where, Governor Winthrop were not pleased to enter a brief period of the voyage, they spent the winter in exploration through the country for desirable locations. The opposite page illustrates the early settlers travelling through the wilderness.

themselves in places about the town or judgment directed the foundations of the city. At Dorchester, Roxbury, and the suburbs of Winthrop and a mate-rially, first settled at the north side of Charles River for public worship. On the 30th of July, 1630, a church in the settlement, and preparatory to the erection of a meeting-house for the governor. But the want of good water, and a brackish spring, were discovered. The climate was oppressively hot, and the colonists, as a consequence, were very dissatisfied with their situation. They went in search of a better spring of pure water on the peninsula on the north side, and a party of the settlers, says Hutchinson, "of the first settlers," in various circumstances in life, inconveniences and discomforts, and exposing their children, to inevitable danger on their voyage across the inhospitable shore, desirous to secure them from the hardships and deprivation of most of the early settlers of Massachusetts.



The Early Settlers travelling through the Wilderness.

colonists, crossed the river to examine it. The only European resident of the peninsula at this time, was William Blackstone, a puritan clergyman, who lived in a cottage near the western extremity of the peninsula, since called Blackstone's point. They at once perceived the advantages the peninsula offered for settlement, and most of the colonists changed their residence to that side of the river, and thither, also, the frame of the governor's house was subsequently brought over and put up.*

* Edward Johnson, one of the sufferers, tells us: "The grief of this people was further increased by the sore sickness which befell among them, so that almost in every family lamentation, mourning, and woe, was heard; and no fresh food to be had to cherish them. It would assuredly have moved the most locked-up affection to tears, no doubt, had they passed from one hut to another, and beheld the piteous case these people were in. And that which added to their present distress, was the want of fresh water. For although the place did afford plenty, yet, for the present, they could find but one spring, and that not to be come at but when the tide was down, which caused many to pass over to the south side of the river, where they afterward erected some other towns, and in October the governor, deputy, and assistants, held their second court, on the south side of the river, where they began to build, holding correspondence with Charlestown, as one and the same."—*Chronicle of Massachusetts.*

The Indian name of the place was Shawmut.* The peninsula jutted boldly out into the broad bay of Massachusetts, and united by a narrow neck to the main land. It was six hundred acres in extent, sparsely covered with trees, and nearly divided by two creeks into three small islands, when the creeks were filled by the tides. Three rounded eminences, swelling from the water's brink, gave the peninsula the name, by the colonists, of Trimountain, from which has arisen the modern name of Tremont. The promontory, being nearly surrounded by water, divided into hills, and small in extent, was capable of an easy defence against the Indians. We have given, on the following page, a view of the peninsula as it appeared at the time Winthrop first visited it. The three eminences have since been named Copp's, Fort, and Beacon hills.

The Indians also had seen the advantages of this peninsula, and there resided here a venerable sachem, when first visited by the white man. The name of Trimountain was soon after changed to Boston, as a compliment to the Rev. John Cotton, who emigrated from Boston, in Lincolnshire, England.

* That is, "sweet water."



Trimountain, or Boston in 1630.

The first general court of Massachusetts was held at Boston, November 9, 1630. This court enacted that the freemen should in future elect representatives, who were to choose a governor and deputy from their own number, and with these, possess power to make laws for the province, and appoint officers to execute them. To this measure the people gave their assent by a general vote; but the court rescinded it early the next year, and enacted that the officers should be chosen by the whole body of freemen.

The colonists began soon to experience the difficulties and hardships which the settlers of a new country are obliged to encounter. Their sufferings the first year were intense, and proved fatal to many among their number. They were undoubtedly the more keenly felt, from having been accustomed to a life of ease, surrounded by all the comforts and luxuries of civilized life. Before December two hundred perished. On the 24th of that month the cold became intense, and Charles river was frozen over. Such a Christmas eve they had never before known. Yet the inclemency of the weather continued to increase. They were destitute of provisions, and many were obliged to subsist on clams, mussels, and other shell-fish, and nuts and acorns supplied the place of bread. "In these extremities," says Cotton Mather, "it was marvellous to see how helpful those good people were to one another, following the example of their most noble and liberal governor WINTHROP, who made an equal distribution of what he had of his own stores among the poor, *taking no thought for the morrow!* And on February 5, 1631, when he was distributing the last handful of meal in the barrel, unto a poor

man, distressed by the wolf at the door, at that instant they spied a ship arrived at the harbor's mouth, laden with provisions for them all."^{*}

As soon as the severity of the winter was sufficiently abated to admit of assemblies being convened, the court proceeded to enact laws for their internal regulation. In 1632, the chiefs of several Indian tribes visited Governor Winthrop and sought his alliance. They were hospitably entertained by the governor, and entered respectively into treaties of amity with the colony.

Governor Winthrop early inculcated the principles of temperance, by both example and recommendation. The benefits of his efforts were evinced, when, in September, 1641, at a general training of twelve hundred men, not a single instance of intoxication or other immorality occurred.

Including the people of Salem, Boston and vicinity numbered about two thousand in 1631, and in 1643, so great had been the emigrations from England that the inhabitants had increased to twenty-one thousand, and several towns were settled on the seacoast and inland as far as fifteen miles. The map on the following page, of Boston and vicinity, as they appeared about this time, is a fac-simile copy from a map of New England, published in 1667, and is believed to have been the first map ever engraved in this country.

A fort was soon built in Boston, on the eminence facing the harbor, and it was from that

^{*} The ship *Lion*, which had been despatched by Governor Winthrop to England for food, entered the harbor of Boston, February 5, 1631, laden with provisions, and having the Rev. Roger Williams on board, a passenger.

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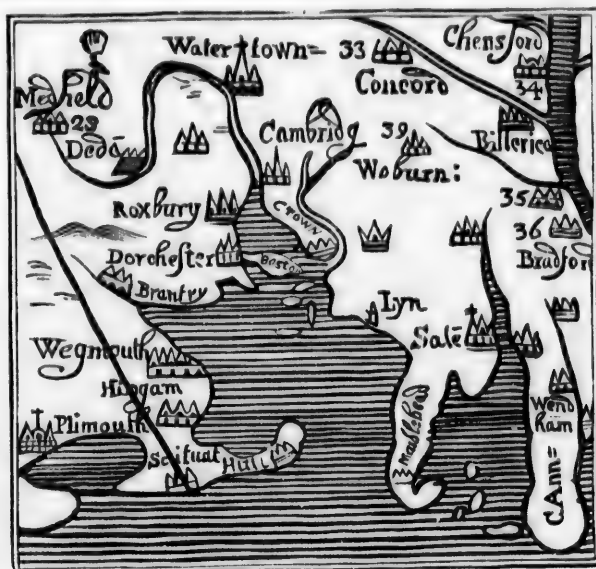
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Map of Boston and Vicinity, in 1667.

time called Fort hill. At an early day, a for- tification was also made on an island three miles below the town, as a protection against foreigners, who were not of friendly views. There were then some piratical vessels on the coast, and the French, who were inimical to the English, wherever they might be, had some naval force in Acadie, now Nova Scotia.

The place steadily increased, with few in- terruptions, till the time of the war of the revolution, in 1775, and various branches of commerce were pursued with great profit and advantage. The people suffered much under the tyrannical rule of Edmund Andros, in 1686-8,* and British revenue laws operated

* In the year 1684, it was decided in the high court of chancery, that Massachusetts had forfeited her charter, and that henceforth her government should be placed in the hands of the king. This event was brought about chiefly by the instrumentality of Edmund Andros. This man had been sent over as a kind of spy on the colonies; he made it his business to collect charges against the colonies, and return to England and excite the jealousy of the British government. In this manner, the way was prepared for annulling the colonial charters. In December, 1686, Andros arrived at Boston, being commis- sioned by King James, as governor-general, and vice- admiral, over New England, New York, and the Jerseys. Like all tyrants, Sir Edmund began his administration with professions of high regard for the public welfare. In a few months, however, the prospect was changed. The press was restrained, lib- erty of conscience infringed, and exorbitant taxes

oppressively; but the town still gradually grew and prospered. It suffered losses in the wars with France in 1754, &c., but by enterprise, industry, and a laudable frugality, it advanced in wealth and population. The population in 1700, was about 7,000; in 1765, 15,520; and at the breaking out of the war of the revolution, about 16,000. Boston was the headquarters of rebellion at this momen- tous period in our country's history. In her streets were made the first fierce and des- perate struggles for liberty; in her legislative halls, the first bold and manly opposition to the encroachments of the mother-country. It was one of her citizens, JOHN HANCOCK, who

were levied. The charters being vacated, it was pretended all titles to land were destroyed: farmers, therefore, who had cultivated their soil for half a cen- tury, were obliged to take new patents, giving large fees, or writs of intrusion were brought, and their lands sold to others. To prevent petitions or consul- tations, town meetings were prohibited, excepting once in a year for the choice of town officers. Least cries of oppression should reach the throne, he forbade any to leave the country without permission from the government.

The colonists had borne the imposition of Andros's government about three years. Their patience was now exhausted. On the morning of April 18th, the public fury burst forth like a volcano. The inhabi- tants of Boston were in arms, and the people from the country poured in to their assistance. Andros and his associates fled to a fort; resistance was in vain, he was made a prisoner, and sent to England.

placed the first signature to that noble charter of American freedom, the Declaration of Independence.

A view of Boston in 1776, is given on the opposite page. It is copied from an English engraving published in that year, and is believed to be authentic. The view is taken from a point on the road leading from Roxbury to Dorchester.

In 1790, when the first census was taken under the present national government, then newly established, the population of Boston was only 18,038. In 1800, it had risen to 24,337; in 1810, to 33,250; and in 1820, to 43,298; showing a rate of increase, in each successive period, of about thirty-three and one third per cent. In 1830, however, the number had advanced to 61,391; and in 1840, to 93,383, showing a rate of increase not far from fifty per cent. in each of these two periods. In 1845 the population was 114,366, an impetus being given by the many lines of railroads concentrating in Boston. The total population of Boston and its immediate vicinity, is now at least 250,000. This acceleration in the ratio of increase, from about one third to one half, is somewhat remarkable, not so much, perhaps, for its amount, as from its coincidence with that change in the policy of our national government, which was adopted for the purpose of introducing and promoting domestic manufactures, through the agency of discriminating and protecting duties on imports. Up to the period referred to, the capital and the enterprise of Boston had been chiefly employed in commerce and its dependent occupations; and though the change in question was most strenuously opposed by the great majority of the commercial classes of that city, yet, when it was once adopted, no community in the country embarked in manufactures more promptly and efficiently; and the result may be seen in the striking coincidence between the date of that change which enlarged the field of enterprise for the intelligence, capital, labor, and skill of that community, and the commencement of a greatly-accelerated rate of increase in its population and wealth.

In this progress of population, the original limits of the peninsula have been found much too narrow for the growing numbers; and the city now consists of three distinct parts, namely, Boston of the peninsula—South Boston, built along the westerly base and slopes of Dorchester heights, on the ground formerly belonging to the town of Dorchester, but annexed to peninsular Boston in 1804—and East Boston, built on an island in the harbor, formerly called Noddle's island, lying off against the northerly portion of the peninsula, and separated from Charlestown and the mainland

on that side, by the waters of the Mystic river where they mingle with the harbor. It is connected with the mainland at Chelsea by a bridge six hundred feet long, and with the peninsula city by steam ferryboats, which start from each side every five minutes. East Boston has grown up wholly since 1833. It is the station of the Liverpool, or Cunard line of steam packets, and the termination of the Eastern railroad.

The town was governed by nine selectmen, chosen by the people annually till 1822, when it became an incorporated city, and is now governed by a mayor, eight aldermen, and forty-eight common-councilmen, composing two boards, who together are denominated the city council. They are chosen annually, the mayor and aldermen from the people at large, and the common-councilmen four from each of the twelve wards.

The peninsular situation of Boston has produced the necessity of an unusual number of bridges to connect the city with the surrounding country. These are six in number, and of great length; and though they are all of wood, and without any pretensions to architectural beauty, yet their great extent, number, and position, give them an imposing aspect, while their great utility and the train of ideas associated therewith, render them objects of lively interest.

The streets of Boston, especially in the older quarters of the city, are rather irregular and narrow; but no city in the Union is more substantially built, or contains a greater proportion of spacious and costly private mansions; and no city on the globe can boast of as high a degree of cleanliness. In this particular, so important to the health, comfort, and pleasantness of a large town, the streets, public areas, and private courts and yards, of Boston, are truly admirable, and a model for all other cities; and the simple means by which this desirable condition of things is secured, is an ordinance which forbids the inhabitants to throw offal, dirt, fragments, or filth of any sort, vegetable or animal, upon the ground in the streets, or in private enclosures, but requires all these things to be put into casks, or vessels of some kind, and these are regularly removed by the scavengers. Thus, the frequent handling of this noisome rubbish, which is the obvious and unavoidable consequence of permitting them to be cast upon the ground at all, is avoided, and the removal of them is rendered complete and certain. These simple regulations being enforced, the city is kept clean, sweet, and wholesome; and that, too, with far less expense of time, labor, and money, than is possible in any other way. This management saves to Boston, every year, many thousands

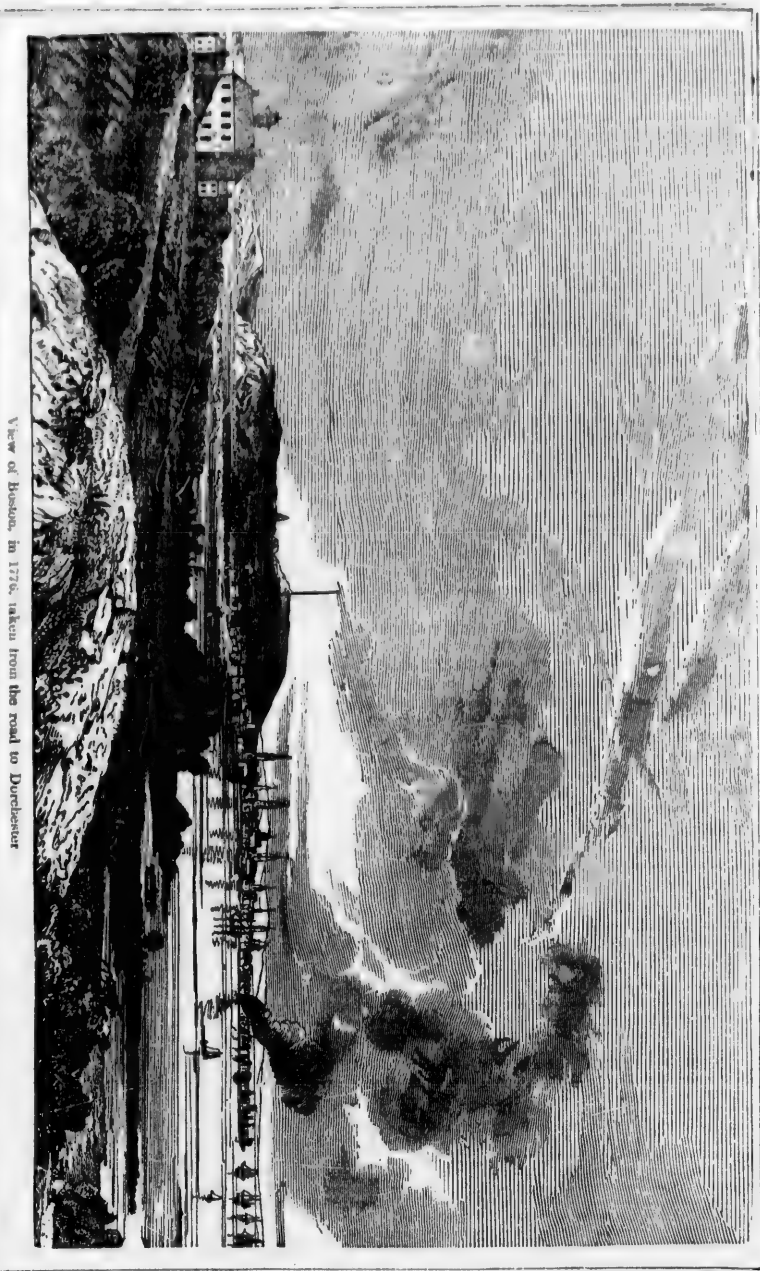
BOSTON.

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View of Boston, in 1776, taken from the road to Dorchester

of dollars in her annual expenditures; and its good sense and great economy are so palpable as to make it really surprising that it is not the settled system of every populous town.

Boston harbor, commodious, deep, easy of access, and yet easily defended, is one of the best in the world. The approach to the inner harbor, immediately in front of the city, is, for a short distance and immediately under the batteries of Fort Independence, by a channel so narrow that two large ships could scarcely pass abreast, while within, it spreads into a noble haven, spacious enough for five hundred ships of any size to ride securely.

In commerce and navigation, Boston ranks as the second city in the Union, standing next to New York, and possessing a tonnage amounting to nearly or quite 300,000 tons. The capital employed in foreign trade is about \$12,000,000. The number of banks, in 1847, was 25, with a capital of \$18,000,000, and 28 insurance companies, with an aggregate capital of \$7,000,000.

The total amount of capital employed in manufactures is upward of \$4,000,000; but a far larger amount of Boston capital is invested in cotton and woollen manufactures in Lowell and other places.

The Cochituate aqueduct, for the introduction of pure and wholesome water into the city has been recently completed, and this important epoch in the history of Boston was celebrated in the most brilliant and enthusiastic manner. Its importance as contributing to health, cleanliness, purity, and a thousand other general and useful purposes, can scarcely be overrated. Lake Cochituate, from which the water is brought, lies about eighteen miles from Boston, in the towns of Natick, Framingham, and Wayland, Middlesex county, Massachusetts. This lake covers an area of 660 acres, and drains a surface of over 11,000 acres. Its depth, in some places is 70 feet, and its elevation above common tide at Boston is 124 feet. The estimated expense was \$1,600,000, but it cost over \$3,000,000.

Besides the aqueduct itself, the great features of this enterprise are the Beacon hill reservoir, in Boston; the reservoir on Dorchester heights, South Boston; the great reservoir and gate-house in Brookline, from which the water of the lake is brought to the street mains and reservoir in Boston, in two iron pipes, thirty-four inches in diameter, and extending nearly four miles, and which are capable of delivering daily three millions of gallons of water; the Charles river bridge at Newton Lower falls, which is built on three arches; the Pipe chamber in the vicinity, and the Road bridge, which is built on a single arch, and said by all to be a most splendid piece of masonry; the waste wier, four miles

beyond the Lower falls, where the aqueduct passes over a considerable stream; and finally, the Gatehouse, a granite edifice at the lake.

The reservoir on Beacon hill covers an area of 40,000 square feet, and will hold 3,000,000 of gallons of water. The level will be six and a half feet above the level of the floor of the statehouse. This reservoir, which will throw a jet of water to a great height, from most parts of the city, is intended for a reserve fountain, in case of any accident to the great pipes. The reservoir on Dorchester heights contains an area of 70,000 feet, and is capable of delivering 7,000,000 of gallons per day. This is also intended for a reserved fountain, and the two reservoirs together will dispense 10,000,000 of gallons of water a day. This quantity, it has well been said, will supply more than sixteen gallons a day, for five days, to every man, woman, and child, in the city.

The fall of the water from the reservoir in Brookline, is two feet to the mile, and the level of the reservoir is consequently eight feet higher than that of the great reservoir in Boston. This reservoir covers thirty acres, and the water will be in some places twenty feet deep, and will average fifteen feet deep, thereby constituting a perfect safeguard for the city, if any accident happens to the conduit above.

Boston has always been conspicuous for its attention and liberality in supporting public schools, where the children of all ranks of the people are instructed. Even for those who wish to study Latin and Greek, or the higher branches of mathematics and natural philosophy, as well as the English language, arithmetic, and geography, institutions are provided; but in the higher seminaries a certain age and progress are necessary for admission.

Could the old sachem, the blue smoke of whose council-fire was curling upward to the skies, from the site of Boston, when first visited by the European, be permitted a brief return to earth, with what feelings would he look upon the present splendor of his ancient domain? What would be his sensations to find it thronged with nearly a quarter of a million of human beings—to find the seat of his humble wigwam now occupied by commodious warehouses and stately dwellings, studded at frequent intervals with minarets and steeples, and glittering domes—to find the broad bay, where glided his birchen canoe, now ploughed by giant steamships, and white with the sails of every land, and its shores lined with a dense forest of towering masts?—

"Would not his altered nature
Rejoice with rapture high,
At the changed and glorious prospect
That now would meet his eye?"

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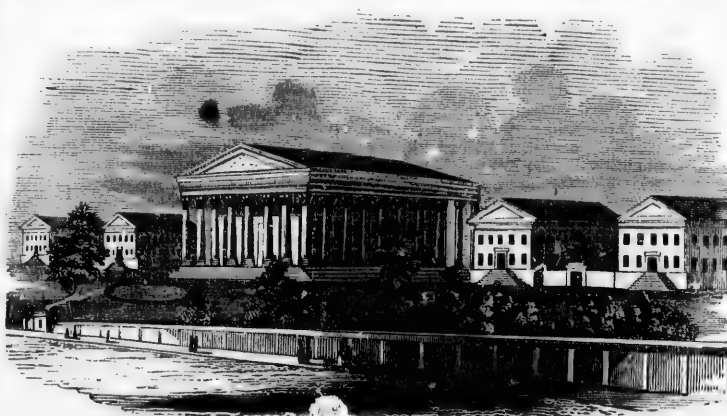
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View of Girard College, Philadelphia.

GIRARD COLLEGE FOR ORPHANS.

THE site appropriated by Mr. Girard, for the purposes of this college was formerly known as Peel Hall; it is situated on the Ridge road about a mile north of the city limits, and occupies a tract of land half a mile in length by an eighth of a mile in width, surrounded by a spacious street sixty feet wide, called College avenue. The main entrance is at the head of Corinthian avenue, a street of eighty feet in width running north from Coates' street west of Third street from Schuylkill. The street represented on the plate is College avenue, running westward from the Ridge road.

The buildings consist of the main college edifice, which will be entirely devoted to educational purposes, and two spacious out buildings on each side, all of which are composed of marble.

The main building is a composition in the Greek Corinthian order of architecture; it stands parallel with the city streets, immediately in front of Corinthian avenue, and covers an area of one acre of ground, being 181 feet wide and 239½ feet long. The body of the building, which is 111 feet wide by 169 feet long, has eight columns on each end and eleven on each side (counting the corner columns both ways), which makes thirty-four columns in all. The colonnade stands on a marble platform seven and a half feet high, 159 feet wide, and 217½ feet long, approached on all sides by eleven marble steps.

Each of the bases of the columns measures nine and a quarter feet in diameter, and the shafts six feet at the bottom and five feet at

the top; the capitals are nine feet high and ten feet wide on the face of the abacus or upper member; the whole height, including base, shaft, and capital, is fifty-five feet. These columns are composed of large blocks of white marble, some of which weigh fifteen tons. Each shaft is beautifully wrought into twenty-four deep flutes, and the carving of the capitals is of the richest and most ornate character. Many suppose that these capitals were imported, but such is not the case; they were all wrought on the college-grounds out of American marble, and the whole building is, in fact, a specimen of American skill and American materials.

The entablature, or the entire mass which rests on the columns, is seventeen feet high; it consists of an enriched cornice projecting nearly five feet, and other mouldings finely proportioned and beautifully wrought. Each end of the building is embellished with a pediment rising twenty and a half feet above the horizontal cornice, thus making the entire elevation of the apex of the roof above the ground about one hundred feet.

The ceiling of the portico is being constructed of immense cast-iron plates, richly embellished with panels and ornamented mouldings.

The roof is composed of marble, and is one of the most interesting portions of the work. We shall describe it in the words of the architect to the building committee, in his ninth annual report. "It consists of marble tiles four and a half feet long, four feet wide, and two and three fourths inches thick; every superior tile overlaps the one below it, and the junction of every two adjoining tiles is cov-

ered with a strip of marble *four and a half* feet in length, *ten* inches in width, and *six* inches in thickness.

"To support these tiles, brick walls of nine inches in thickness are built *three feet nine inches* apart, across the whole surface of the upper arches, from side to side of the building; the top of each wall is formed with a declivity from the ridge to the eaves, corresponding with the pitch of the pediments.

"The large tiles are laid on these walls, beginning at the eaves and extending to the ridge, each superior tile overlapping the one below it six inches. The sides of these tiles are elevated an inch and a half above the general surface to prevent the water from running into the joints at their junction; and the narrow tiles which cover these joints are hollowed out so as to embrace the projection of each contiguous tile.

"All the joints and overlappings are so formed as to prevent the admission of water either from the force of beating rains or from capillary attraction;—at the same time their design is such as to admit of their being laid without coming actually in contact with each other, thus rendering them free to expand and contract with the various changes of temperature without producing leaks; the whole is, therefore, rendered water-tight without depending at all on cement.

"The plan of supporting the tiles on walls affords access at all times to the under side of every tile; and in order to facilitate their inspection, openings are left in the walls opposite each skylight, by which a portion of light will be admitted into every compartment.

"The gutters are formed of flagstone and bricks laid in hydraulic cement, and securely covered with heavy milled lead. These gutters are so constructed as to prevent any water from running over the eaves; by this plan the cornices will not be liable to the mutilation and premature decay to which they would otherwise have been subjected, and which mars many of the noblest structures of ancient as well as modern times.

"The conductors for carrying the water from the roof consist of heavy cast-iron pipes of ten inches in diameter, securely put together and embedded in walls of the building."

The interior of this building is divided into three stories of twenty-five feet in height, and each story into four rooms of fifty feet square, with a vestibule at each end of twenty-six feet by the width of the building. The first and second stories are vaulted with groin arches, and the third story with domes supported on pendentives springing from the corners of the rooms; this story is lighted by skylights sixteen feet in diameter.

All the floors and stairways are composed of marble, so that there is no wood employed in the construction of the building except for doors and windows. The stairways ascend from the vestibules in each of the four corners of the building, and present an exceedingly light and graceful appearance; they are embellished with beautiful cast-iron balustrades, starting from polished marble newels.

The doors of entrance are on the north and south fronts opening into the vestibules; they are each sixteen feet wide by thirty-two feet high in the clear; the lower section of the panelling alone is made to open. Each vestibule is vaulted from an entablature supported on eight columns and eight antæ, or square pillars attached to the walls, making forty-eight columns and forty-eight ante in all the stories; the shafts of these columns are each composed of a single block of marble. The order in the *first* story is Ionic, in the *second* a modified Corinthian, and in the *third* a similar order rather lighter and more ornate. Each stairway is crowned with a richly panelled pendentive dome ceiling lighted with a skylight of ten feet in diameter.

The four out buildings are each fifty-two feet wide, one hundred and twenty-five feet long, and three stories high, with a basement of seven feet above the ground. The easternmost building is divided into four separate private residences for the president and professors, and the remaining three are designed for the residence and accommodation of the pupils and their attendants.

THE WINSLOW HOUSE, MARSHFIELD.

This venerable relic of the days of the Pilgrims, is situated on the Winslow farm, now the property, we believe, of the Hon. Daniel Webster, in Marshfield, Massachusetts. It is in the southern part of the town, on the borders of the ancient town of Duxbury, and about ten miles from the more ancient town of Plymouth, where the Pilgrim Fathers first stepped upon the sacred Rock, and about thirty miles from Boston. The house is more than a century and a half old, and is of course built in a most antique style of architecture. It was formerly the residence of Colonel John Winslow, a great-grandson of Governor Edward Winslow, one of that noble party who came over in the May-Flower. He died at Hingham, in April, 1774, in the seventy-second year of his age, and the Winslow name has become extinct in the venerable town of their adoption.

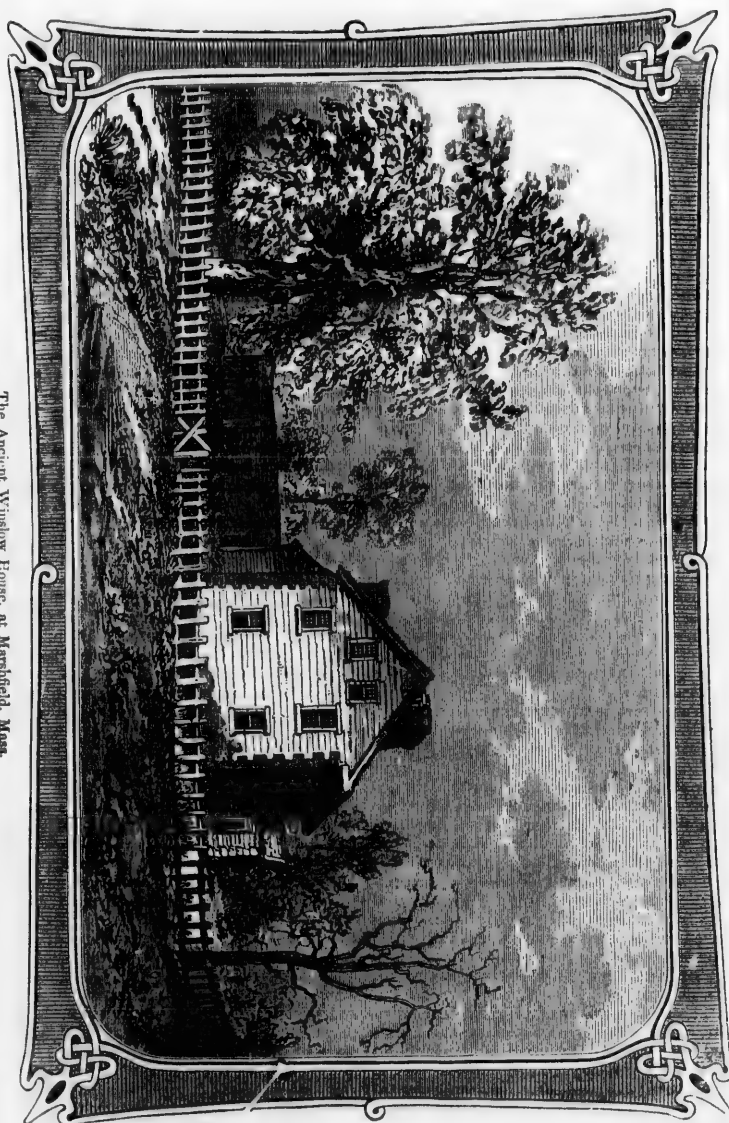
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MARSHFIELD.

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The Ancient Winslow House, at Marshfield, Mass.



MERCHANTS' EXCHANGE, NEW YORK.

WALL STREET is known, the world over, as the mart of the money-changers in New York. It is, indeed, chiefly filled with bankers and brokers, who rejoice in fingering bank-notes, half joes, eagles, and dollars, the former of whom are happy to receive your money on deposit and accommodate you with a loan at a moderate discount, and the latter of whom are ready to negotiate a note for a reasonable advance, or to change uncurrent into current money at a slight charge. But there are no inconsiderable numbers of other gentry, who would be happy to acquaint themselves with your purse, as assurers, lawyers, notaries, speculators, stock-jobbers, packet-officers, money-collectors, customhouse officers, news-mongers, and agents in any line whatever.

The whole street is immeasurably active in the general pursuit of money. The business of every house relates to money, notes or stock; in every group the subject of conversation is money, notes, or stock; the life, motion, and being, of every man in Wall street is money, notes, or stock. Everything is done by exchange, whether it be an exchange of money, of notes, of bonds, of stock, of estates, of opinions and information, or of nods and winks significantly appertaining to that mode of making money, called *speculation*. Here fortunes are won in an hour, and here too they are lost as soon. Gold is here the beacon of hope, and the mainspring of action; but also too often does it prove the *ignis-fatuus* of deluded adventurers, and the siren of evil and destruction.

Wall street is also the centre of commercial information and general news. Hither all citizens who are infected with the *cacoethus audiendi*, flock, to learn how the world wags, as well as to proclaim such items of intelligence as may have reached their understandings alone. The merchants particularly collect here in great numbers, at mid-day, to confer together upon the objects of trade, and to survey the general indications of the commercial atmosphere. For the greater convenience of these daily assemblages, which have become very necessary and important, a building has been particularly erected, called the Merchants' Exchange, and devoted to that object.

This edifice, a view of which is given opposite, embraces all the ground between William and Wall streets, Exchange place and Hanover street, covering the entire block. It has a somewhat confined situation, and shows to less advantage than if it were surrounded by open grounds. It is of the Ionic order of architecture and is built in the most substantial form, of blue Quincy granite. The dimen-

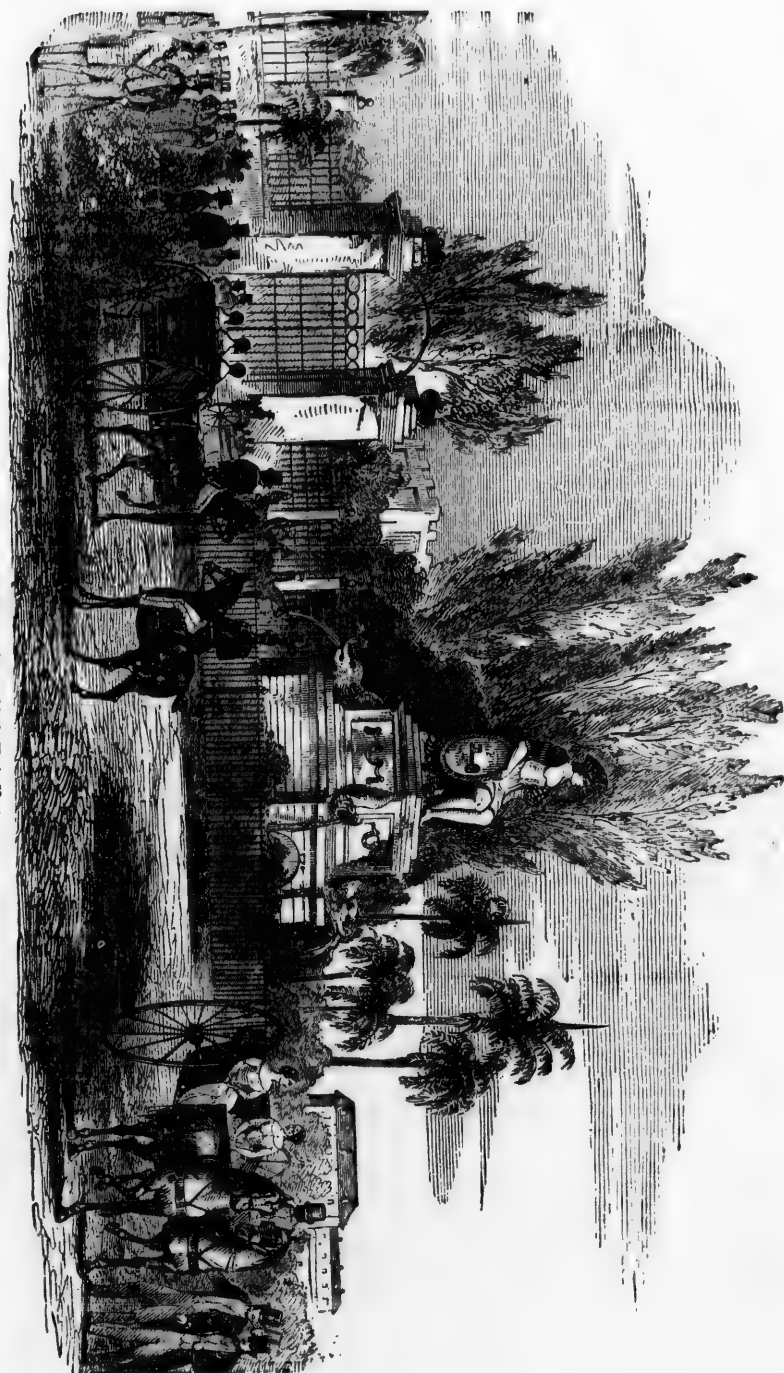
sions are one hundred and ninety-eight feet on Wall street, one hundred and seventy-one on William street, one hundred and forty-four on Hanover street, and one hundred and ninety-six feet on Exchange place. It is seventy-seven feet high to the top of the cornice, and one hundred and twenty-four feet from the foundation wall to the top of the dome.

In front, on Wall street, is a recessed portico, with eighteen massive Grecian-Ionic columns, thirty-eight feet high, and four feet four inches in diameter, each formed of a solid block of stone. It required the best application of the mechanical powers, aided by horses, to raise these enormous pillars. The process of obtaining such immense masses from the quarry is curious. The quarry whence they were brought is in the side of a hill; the ends of a block of granite are cleared, a row of holes are drilled in a straight line, wedges are inserted, and an enormous piece of stone weighing from three hundred to four hundred tons is thus wedged off with ease. Each of the columns for the portico weighed about ninety tons in the rough, and five men with a simple apparatus drew it out of the quarry in two or three days to the place where the workmen stood ready to hammer-dress it. The fair market price of one of these columns is \$6,000; but the Exchange company paid only \$3,000 for them, delivered in New York. These columns with but one exception (that of a church at St. Petersburg), are the largest in the world, and each of them, including the base, cap, and shaft, weighs forty-three tons. The exchange room or rotunda is a most magnificent apartment, in the centre of the building. The height of it to the spring of the dome is fifty-one feet, and above this the dome is thirty feet high; the whole is surmounted by a lantern sky-light thirty-seven feet diameter, and six feet high. The floor is to be of fine marble—its diameter is eighty feet in the clear, and one hundred feet in the recesses, forming an area of seven thousand square feet, which it is estimated will hold three thousand persons. The dome is partly supported by eight polished Italian marble columns with Corinthian capitals, executed in Italy; these are forty-one feet in height, including the cap and base, and four feet eight inches in diameter. There are also many rooms for the accommodation of public and private offices. When it is recollected that this fine building has been erected in the place of an elegant exchange building, burnt in the great fire of 1835, it is a matter of congratulation that it is of materials absolutely incombustible, no wood, but the doors and windows, having been used in its construction. The cost of the building, including the ground, was about two millions of dollars.

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SCENE AT HAVANA



THE HOTEL DE VILLE, PARIS.

THE Hôtel de Ville, or town-hall of Paris, is a massive structure, situated in the Place de Grève; and, like all ancient public buildings, the stirring events of past days and years are associated with its history. The plan of the present edifice was presented to Henri II. by Dominique Boccardo, an Italian architect, in 1549, but many alterations and additions have since been made to it. Omitting any description of the exterior (a fine view of which is given in the engraving) we proceed to notice the courts and saloons.

The central court is approached from the western front by a flight of steps, and is surrounded by an arched Ionic portico. In the centre stands the pedestrian statue of Louis XIV., representing the monarch clothed in Grecian armor. The marble tablets around the frieze were inscribed with the principal events of his life, but time, assisted by the hand of violence, has nearly effaced these. The northern and southern courts are connected with this by flights of stairs, and are adorned with Corinthian and composite columns.

The *Salle de Danse* is a magnificent saloon, in the Corinthian order, the ceiling being divided into square compartments.

Below this is the *Salle de St. Jean*, of equal splendor with the former saloon, adorned with Doric columns detached; it occupies the whole space between the intermediate eastern pavilions, which are used for the *Octroi Municipal*, and other public offices.

The *Grand Salle*, or *Salle du Trône*, occupies the whole of the central portion of the building. The fireplaces are of white marble, elaborately ornamented with recumbent figures, in the style of the times of Henri IV. Armorial bearings and escutcheons adorn the ceiling.

The *Salle d'Introduction*, containing two statues of Henri IV., and the *Salle de Jen*, come next, the latter conducting to the *Salle de Bal*, a grand and magnificent apartment, as regards both extent and height, and splendor of furniture; devoted to entertainments, fetes, balls, and banquets. There is also a spacious dining-room, of sufficient capacity to seat a thousand guests. Underneath this are extensive kitchens. There has, in addition to these, lately been constructed a suite of apartments, worthy the residence of either a king or a president.

The Hôtel de Ville has been the theatre of action of the most thrilling and important events in the history of France. In the early part of the reign of Louis XIV., an assembly was here convened, to deliberate on the propriety of inviting the court, the queen-

mother, and her son, to return to Paris, from which they had fled on the occasion of the *Prince de Condé* the leader of the *Fronde*, having assumed a position hostile to the Cardinal Mazarin. The officers and soldiers of the bold and daring Condé, filled the Place de Grève, intermingled with the people, and compelling all passers-by to wear a few pieces of straw, the badge of partisanship. At the moment, while a letter was being read to the assembly from the king, the prince, the duc d'Orleans, and their partisans, entered the hall. The prince returned thanks to the citizens for opening the gates of Paris to his army. As the king's letter contained no promise of the dismissal of the offensive minister, Mazarin, an angry discussion ensued; the assembly was broken up; the Prince de Condé accused the members of being partisans of Mazarin, and declared that they should not depart. A rush was made for the door, but the guards had closed it; a volley of musketry was fired upon the windows, fagots were placed before the entrance, and fired to prevent the escape of the inmates. The work of death commenced, and many were slain; a few escaped, among whom was the governor of Paris, disguised as a priest.

At the first outbreak of the revolution of 1798, the Hôtel de Ville was rendered memorable by another scene, enacted within its massive walls. Louis XVI., was here received and welcomed with acclamations—alas! how soon to be changed to the dismal notes of death! Louis, in return for the acclamations of the people, appeared at the window, to express his sense of their approbation. With the cap of liberty on his head, and wearing the national cockade, he addressed the thousands assembled around the building; and was heard to say, with visible emotion, "*My people may always depend upon my regard and affection.*" How truly, indeed, have the words of divine inspiration proved to be the only true guide: "*Place not your trust in princes.*"

But a few months had elapsed after the visit of Louis, when a man appeared at the Hôtel de Ville, at the mention of whose name humanity shudders: the hero of the "reign of terror," Robespierre, who was conducted thence to his execution in the Place de Grève.

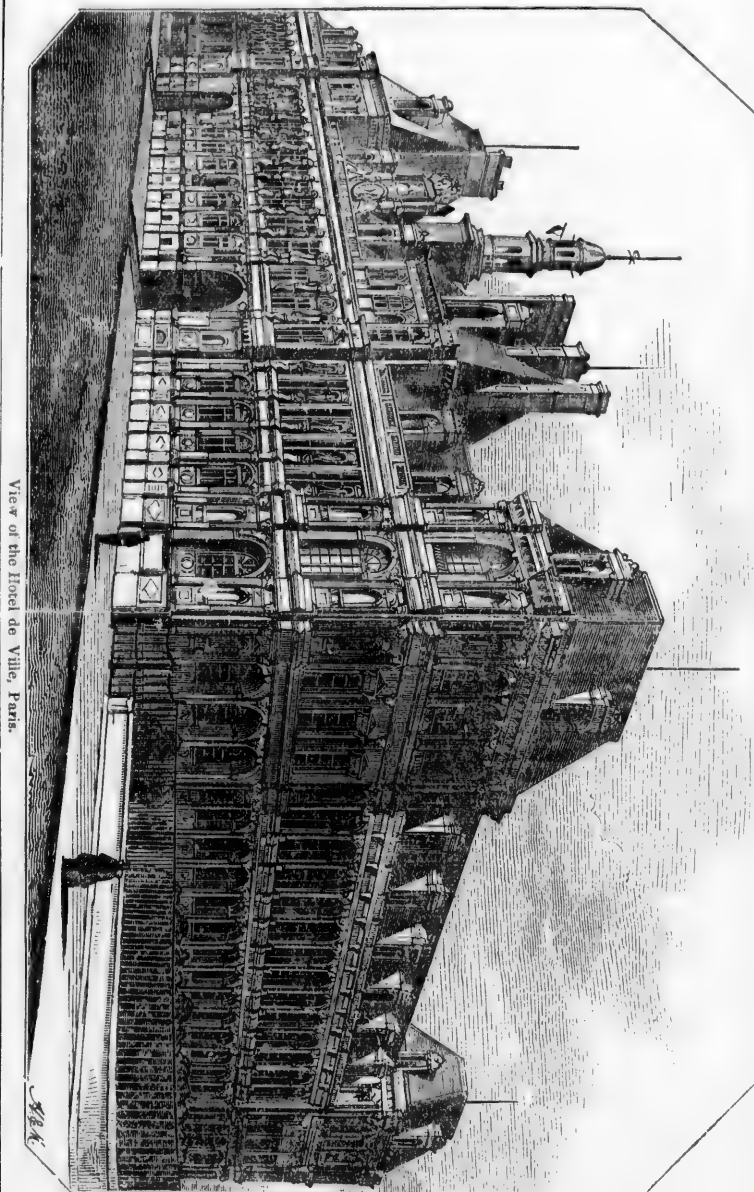
In the year 1830, the populace of Paris rose *en masse*, to dethrone Charles X.; and, after three days' struggle, this monarch fled from his palace and his capital. A provisional government held its sittings at the Hôtel de Ville. Their choice fell upon Louis Philippe, duc d'Orleans. He was pronounced "the citizen-king;" and from the same window of the same room whence Louis XVI., addressed

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View of the Hôtel de Ville, Paris.

the people, Louis Philippe addressed a succeeding generation of Frenchmen, and told them, that in him they beheld "*the best of all republics!*" And from the pavilion of the Hôtel de Ville, was first unfurled the tri-colored flag, indicating the triumph of the people.

Within the last year, 1848, another provisional government has held its sittings within the walls of this renowned structure (the monument of the fall of royalty) and proclaimed France a *republic*. We conclude by noticing the progress of the seven deputies to the place where they were to prepare the foundation of a new government. "The nearer," says the historian, "they penetrated the heart of the city, the more animated were the applauses and sympathies which greeted them. The crowd at each step became more numerous, and surrounded them with cries of '*Vive la Liberté!*'" What enthusiasm hailed their arrival at the *municipal palace*—the *HÔTEL DE VILLE!*"

CATACOMBS OF PARIS.

THE origin of the great catacombs, or receptacles for the dead, attached to the French capital, is in every point of view curious and interesting. Previously to the latter end of last century, the burial-places of the city were in a condition at once disgusting and destructive to human health. One of the early French kings had bestowed a piece of the royal suburban grounds on the inhabitants as a place of interment; and this spot, the site subsequently of the church of the Innocents, continued for nine or ten centuries to serve as the sole or principal receptacle for the dead in Paris. Not only was this the case but the cemetery was also applied to its purposes in a manner unusually dangerous. Large pits were formed, each about thirty feet deep and twenty feet square, and into these coffins were lowered, one tier above another, without any intervening earth, until the pits were filled. Each was then covered with a thin layer of soil. The common number of bodies cast into every excavation amounted to from twelve to fifteen hundred; and, in the thirty years preceding 1780, nearly ninety thousand bodies had been thus deposited in the charnel-holes of the Innocents. Once in every thirty or forty years, it had been customary to execute the frightful task of opening and emptying these pits; but, in the case of great numbers of the older ones, this task had long ceased to be fulfilled, and they accordingly remained unmoved, though so

choked up with the matter of corruption as to rise above the level of the adjoining streets, and seriously to affect the air in the ground-flats of the houses. It was supposed that, from the time of Philip Augustus, more than 1,200,000 bodies in all, had been interred in the cemetery of the Innocents; and as the mouldering bones, even when the pits were cleaned out, were merely conveyed to an arched gallery surrounding the burial-ground, it might be said that some portion of all that had ever lain there still remained.

When all men of science and sense were beginning to recognise the necessity of remedying this evil, another cause of peril and alarm chanced to agitate the city of Paris; but, fortunately, the one was found capable of serving as a remedy for the other. Quarries of stone had been opened in the immediate vicinity of Paris, at an early period of its history, and had been wrought, to a large extent in the course of successive ages, to supply materials for the increasing city. In consequence, a vague notion existed among the inhabitants, that the city was considerably undermined. Little attention was paid to the matter till 1774, when some alarming shocks and falls of houses aroused the fears of the government. A regular survey took place, and the result was the frightful discovery, that the churches, palaces, and almost all the southern parts of the city of Paris, rested upon immense irregular excavations, and stood the greatest risk of ere long sinking into them. A special commission was immediately appointed to take the proper steps for averting such a catastrophe; and the necessity of such a commission was made strikingly apparent on the first day of its operations, by an accident in the rue d'Enfer. A house in that street sunk down in an instant, eight-and-twenty metres below the level of its courtyard.

When all the labyrinths of the quarries were inspected, and plans taken of them, the alarm of the Parisians was far from being abated. Every quarrier had habitually worked, it appeared, where he chose or where he could; and, in many cases, excavation was found below excavation, the whole running to almost interminable lengths, while the pillars that had been left were found, in almost all cases to be totally insufficient to bear permanently the enormous weight above. In various instances, the roof had sunk considerably, and in others, large masses had actually fallen, rendering it almost marvellous that the city should not long before have become a mass of ruins. The great aqueduct of Arcueil, which passed over this scene of hidden peril, had in reality suffered some shocks, and if the risk had not been timeous-

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ly discovered, it can scarcely be doubted that the ultimate issue would have been the charging of the quarries with water and the sapping of the city. The commission began its work of cure, aided by a very large body of workmen. Great pains were taken in cutting galleries from labyrinth to labyrinth, to ascertain the extent of the mischief, and in vaulting and propping every part that seemed to require such support. The extent of the quarries, however, rendered the labor gigantic, and, long ere matters were permanently put in order, the happy idea of converting these excavations into receptacles for the refuse of the charnel-house of the Innocents, had occurred to M. Lenoir, the inspector of the city police. The suggestion was made public, and approved of by the council of state, who, in 1785, decreed the opening of the charnel-pits of the Innocents, and the removal of the bones of the dead to the quarries. The first step was to make an entrance into the quarries by a flight of seventy-seven steps, and to sink a shaft from the surface, down which the relics of mortality might be thrown. At the same time, the workmen below walled off that portion of the excavation designed for the great charnel-house, and properly supported the roof. On the 7th of April, 1786, all the preparations being completed, the new catacombs were consecrated with much solemnity, and on that same day the work of removal began. Bones and partially-preserved coffins were brought by night to the shaft in funeral cars, followed by robed priests chanting the service for the dead. The nature of the task, the glare of the torches, and, above all, the hollow rattling and echoing of skeletons, bones, and broken wood, in their fall down the shaft, sent back, as the sounds were, by the vaults below, rendered the whole scene peculiarly impressive and awful.

But the relics of human beings, in their ordinary condition, were not the most remarkable part of the materials transferred from one site to another on this occasion. The pits of the Innocents exhibited immense masses of the soft white substance called *adipocire*, into which the bodies had been converted, and which had been noticed under similar circumstances at former periods. *Adipocire* had some of the mingled qualities of wax and tallow, being capable of use in the manufacture of candles. Respect, however, for what had once been the human body, of course dictated the consignment of the masses of *adipocire*, found in the pits of the Innocents, to the new catacombs under the plaine de Mont-Rouge.

The catacombs of Paris received in succession the contents of the smaller cemeter-

ies of Saint-Eustache and Saint-Etienne-des-Gres, after those mentioned. There, too, the victims of the revolution found a ready and roomy abode; and when the popular fury demolished a number of the churches, the bones lodged in them after the old fashion, were removed to the same great receptacle. Between 1792 and 1808, the catacombs received the exhumations of twelve other minor cemeteries in and around Paris. Between 1808 and 1811, new excavations, made in the cemetery of the Innocents for the passage of a canal, rendered it necessary to convey a large quantity of additional relics to the catacombs; and a few other churches and cemeteries were emptied into them in the course of the next few years. Having thus made use of the quarries, and poured into them in all an immense quantity of human remains, the Parisians did not adopt the catacombs, as perhaps they might wisely have done, as their general burying-place. On the contrary, they created various new cemeteries above ground, though under comparatively excellent regulations, as the famous Père la Chaise and Montmartre sufficiently testify.

The revolutionary disturbances impeded the operations still requisite to render the vast quarries and catacombs of Paris stable and safe. The ordinary vaults became, consequently, full of cracks, water filtrated through the roofs, and fresh downfalls seemed impending. The air was rendered noxious by the want of circulation. In 1810, M. de Thury, the architect, began to make new repairs. He built new pillars, and formed channels for removing the water. Air was introduced simply but effectively, by luting the upper half of a broken bottle, with the neck outermost, into the wells which supply the houses above with water, and which had been made to descend through the quarries to the ground below, like so many round towers. By uncorking these bottle-necks, air is let in at will. As regarded the catacombs, the bones lay in heaps thirty yards high in some places, and the workmen had to make galleries through them, and pile them along the walls in regular order. Such as exhibited disease were arranged into an osteological cabinet. In short, order and security were, for the first time, truly introduced into the arrangements of this subterranean world.

The catacombs of Paris remain, generally speaking, nearly in the same condition as left by M. de Thury, though various minor improvements have been added, to render the place more interesting to visitants. Three staircases, of which the best known is that of the Barrière d'Enfer, conduct the modern

visitor into the vaults. On entering, a black line is to be noticed traversing the centre of the passages, and forming a guide through them, which the most familiarized visitor can not safely neglect. On the right and left of the first gallery, that of the Rue St. Jacques, several others are seen stretching away under the plain of Mont-Rouge. The visitor can not penetrate far, until he sees startling marks of the fall of rocks, and beholds stalactites hanging down in abundance from the walls. In the gallery under the Rue St. Jacques, is also seen the great aqueduct of Arcueil, with its supporting columns.

By various sinuosities, the visitor arrives at the gallery of Port Mahon, so called from a sculptured view of the taking of that fort executed by Decure, an invalid soldier. He perished there by a fall of the rocks, while the chisel was yet in his hand. A fountain was here discovered by the workmen, and a basin made for their use, with a small subterraneous aqueduct. It was first called the Well of Lethe, and was inscribed with a couplet from Virgil; but a scriptural quotation, more appropriate to the place, now marks its site: "Whosoever drinketh of this water, shall thirst again; but whosoever drinketh of the water I shall give him, shall never thirst; but the water that I shall give him, shall be to him a well of water springing up into everlasting life." It contains a few goldfish, which seem to bear that dark abode very well, as we find them mentioned by visitors of both 1818 and 1832. A few other inscriptions are to be found here, such as Danté's famous line:—

"Leave hope behind, all ye who enter here."

A fire is also kept burning, in an antiqueshaped vase, to purify the air of the vaults.

A mineralogical collection of some interest has been formed from the various strata composing the sides of the galleries. But the most interesting collection here is the Museum of the Dead. On approaching the catacomb galleries, the visitor finds the vestibule to be in the form of an octagon. The gate is flanked by two pillars, and is inscribed above with some lines of poetry. The interior of the catacombs is arranged with propriety and decorum. The crypts holding the divisions of piled bones have each of them different names, some of which are appropriate, others absurd. There is the crypt or niche of eternity, for example, that of Death, and that of the Resurrection, each marked by corresponding inscriptions. There is also a niche for the victims of the revolution, with some Latin lines above, which may be rudely Englished:—

"Thus, when fierce Discord had usurped the throne,
Prompter of crimes, and law and right were scorned,
By bloody, ruthless men were done to death."

Among the inappropriately-named crypts may safely be reckoned those to which the names of Ovid, Anacreon, and some others, have been applied. An album, as might have been anticipated, is among the other appendages of the catacombs.

The other galleries of these great excavations need not be named or described in detail. One general feature marks them all, and it is worthy of mention, as reminding us most forcibly that these vaults are not simple objects of curiosity, or to be thought of merely as pleasant spectacles, but are to be lamented as the possible sources of calamity and ruin to the great city under which blind neglect allowed them to be formed. Constant attention to them is imperatively demanded to secure the safety of the capital of France, and the provision adverted to consists in every subterranean street being numbered precisely like the one occupying the ground above. This is necessary in order to apply new supports, on the slightest indication of danger, to the exact point where they are required.

SCENERY IN ENGLAND.—OXFORD.

THE Rev. H. W. Bellows, of New York, gives the following graphic sketch of country scenery in Old England:—

We had our first view of the face of England to-day, in a ride on the stage-coach from Warwick to Oxford. The distance is forty-five miles, and was accomplished in five hours and a half, including at least an hour's stoppage. Nothing can exceed the charm of a drive through this lovely country in the spring time, over the roads as smooth as a floor, behind horses fleet as stags, between hedges green as new grass and white with blossoms; in view of thatched cottages, ivy-clad village churches, gray with moss and time, with the familiar features of the Old England of the story books, and the drawing-master's gable end, tumble-down wandering picture-houses, all, "large as life, and twice as natural," full before you! There is but one word descriptive of English scenery—England is one great garden.—Everybody says so, because nobody can say anything more or less. We found the grounds about Eaton hall, concerning which much is said, no finer than the general appearance of the country wherever we went. It all looks much like the immediate neighborhood of Boston. Many slopes of gentle

hill sides, or stretches of meadow, reminded us vividly of the undulations of Roxbury and Brookline, and the banks of the Charles, which is a very good sample of an English river, of the largest size. To an American eye, accustomed only to the beginnings or progress of things, it is very delightful to come upon a country that is finished. The order, plan, cultivation of English ground, seems perfect. You may ride fifty miles and not see one neglected plot of land, one broken-down fence, one new building, one make-shift device. But amid all this perfection of agriculture, all this order and solidity and finish of structure, it is painful to see how little room the people take up, how inferior their accommodations are; how small a feature the homes of the million form in the landscape. The dwellings of those who cultivate this soil, are hardly higher than the hedges, and wear the look of stone sheds, or places for farming-tools. Seeing the marks of so thick a population in the tillage, the traveller looks around for the farm-houses, which, in America, would so prominently enliven and distinguish the landscape; but in England the common people dwell in *cots* that make a surprisingly small figure in the prospect, and give the agricultural districts almost the appearance of being uninhabited. We could not help continually asking where are the people, and where do they live, who did all this work!

Of the city and university of Oxford, Mr. Bellows says: Either we have been very dull readers, or travellers of England have given a very lame and inadequate account of Oxford! It is a matter of very serious doubt with us, whether Rome itself will have power to awaken deeper feelings of wonder and delight, or leave a more vivid and peculiar impression upon our minds, than Oxford. We shall take the liberty of supposing our readers as ignorant as ourselves of the university and city of Oxford, and endeavor to make them as wise as one very busy day there made us.

Oxford was, from very early times, as far back as the year 750, perhaps, the seat of some religious houses, priories, or monasteries, under the catholic order of things. Here, too, from a date quite as remote, were established, under the patronage of these establishments, various schools. These religious establishments possessed much wealth, in lands, and privileges, and pious bequests, and, as the catholic faith declined, they were converted, both buildings and lands, to the use of these schools of learning, which thus became endowed with property which every century, until recently, has done much to appreciate. Thus the university of Oxford is composed of twenty-four different and inde-

pendent schools or colleges, each owing its origin to some more or less remote foundation, in an ancient monastic establishment, or else to the piety and munificence of some pupil of one or another of these establishments, whose gratitude tempted him to found another school like that in which he himself had been nursed.

It is necessary to remember that Oxford is a city of thirty thousand inhabitants, occupying, perhaps, two miles square, of which, far the largest part, is taken up in college buildings and grounds. When it is stated that the number of resident students is sixteen hundred, it will not excite surprise to hear that the college buildings are immense. They are uniformly built round a quadrangular court, and very few of these squares are less than two hundred feet on each face. Some of the colleges contain as many as three quadrangles, and, besides the large courts within, are surrounded by grounds from fifty acres to two miles in extent. These grounds, through which the two rivers of Oxford, the Cherwell and the Isis, meander, are laid out in the most tasteful manner, full of shrubs and flowers, and carpeted with a velvet sward. Trees, of great magnitude and age, shade the cool walks. There is as much difference in the extent, endowments, age, lands, numbers of students among these colleges, as if they were in different parts of the country, and, except for certain purposes, they are as independent of each other as Harvard, Yale, Columbia, and Union. Consider, now, that there are twenty-four of these colleges, each having edifices of its own, a hall or refectory, a chapel, a library, lecture-rooms, and dormitories; and that while several of them have very much more extensive accommodations than Harvard or Yale, few have less, and you will form an idea of the extent of the university of Oxford. Now, if it be remembered that these colleges are all built of stone, and usually in the highest style of architecture; that they form the most massive piles of building, with two or three exceptions in the world; that they preserve very much the appearance of the old monasteries from which many of them sprung, having still parts of the old buildings with the chapel, cloisters, refectory, and cells of the religious orders of seven hundred and a thousand years ago; that piety, and wealth, and taste, have lavished, for many centuries, their stores in adding to these buildings, or restoring them; if it be understood, that whatever we are accustomed to see in our own country in Gothic architecture most elaborately wrought in wood and plaster, is here upon a far more magnificent scale, and with an increased richness, done in solid stone, both within and without,

D.—OXFORD.

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so that the most blows may not be found in marble there—if it be also considered that it takes a whole day barely to walk in and out of these different quadrangles, each spacious and splendid, and costly enough for the palace of a mighty sovereign; if it is further remembered, that there are twenty-four chapels, each a magnificent temple, within this university, and full of the most costly work in stone, or oak carving, or painted ceilings, or invaluable memorials of the past—as many libraries, too, scarce one of which contains less than thirty thousand volumes, with a common library (the Bodleian) containing five hundred thousand—as many halls full of portraits, by the best masters, of the most celebrated scholars or statesmen of England for a thousand years past, museums of all that is instructive in science, art, antiquity, and these countless edifices of substantial stone in various stages of preservation, most of them hoary with age, flecked with moss, or with jagged outlines where the tooth of time has gnawed, contrasted here and there with those of lighter color, and sharper and fresher outlines, but of the same primeval style, and all soft with the damp and soot of the English atmosphere—and then the reader will have a tolerably adequate notion of the outward seeming of this vast, magnificent, and glorious university of Oxford.

THE INDIAN CHILD'S GRAVE.

"Ah, little thought the strong and brave,
Who bore their lifeless chieftain forth
Or the young wife, that weeping gave
Her first-born to the earth,
That the pale race, who waste us now,
Among their bones should guide the plough."

The subject of our engraving was furnished by the above lines from Bryant's Poem, on "An Indian at the Burying-place of his Fathers." In order to appreciate fully the lasting interest and beauty of the picture, it is necessary that the mind should recur to those primitive days, when, upon the very ground where we have built our homes, the "red ruler of the shade"

"Walked forth, amid his reign, to dare
The wolf and grapple with the bear."

The simple Indian is the "forest hero" of this western world, and the white man has but just set his foot upon its unsubdued shores. At the opening in the border of the forest, for

By the vernal skirts of the old groves,"

an Indian and his young and tender wife are observed weeping at the grave of their first-born that they have just yielded to the earth.

"A low green hillock, two small gray stones,
Rise over the place that holds its bones."

The swarthy Indian has sat himself down beside a rude rock, and leans upon it, hiding his face in sorrow. Long raven hair veils the face of the young wife, as she droops in the fulness of grief upon her protector's knee. In the rudeness and simplicity of nature, they wear but the wampum blanket to shield their bodies, and the ornamented leathern moccasin protect their feet. The only guarantee of a livelihood for the morrow, the sorrowing Indian grasps in his right hand, his bow. At their side lies the swathing board, that but recently bore the young innocent, whose lifeless body the "green hillock" has too prematurely covered. Close at hand sits their faithful companion, the dog, not altogether lacking sympathy, gazing listlessly into the trees. As if to soothe the loneliness of grief, nature has arrested her elements, and a "vast solemn" stillness seems to reign around. While, on one side, the huge trunk of a mighty oak ascends spreading its branches high over the scene, the aspiring saplings upon the other seem striving to reach with their topmost boughs the nethermost limbs of that Father of the forest. The affections of the wife have intertwined themselves with those of her hardy companion and protector, upon whom she reclines with confidence; fit emblem of the tender relation of that gentler portion of the Indian pair, a vine has entwined itself around the oak, and acquiring assurance in the enduring strength of its supporter has extended itself into the branches.

A little beyond the group, a ploughed field extends itself, whence the white man,

"hewed the dark old woods away,
And gave the virgin fields to the day."

Carrying the view still further in the distance, and over various cultivated fields, undulating, and studded here and there with clumps of trees, the eye meets a beautiful river, which, after threading its way among rocky hills and beetling cliffs, and along overshadowing forests, debouches peacefully into the sea. Its quiet bosom, however, bears a busy squadron of the white man's ships, that have come to burden themselves with the riches of this new treasure land. Full of new zeal, the white man has set his encroaching foot upon the Indian's shore, and elated with his glories and successes, he has reared up a city there, a monument of his bold enterprise, and easily acquired wealth. The landscape lessens among the hills, and the distance is lost among the far-retiring mountains on one side, and the ocean which confuses its bounds with the horizon on the other.

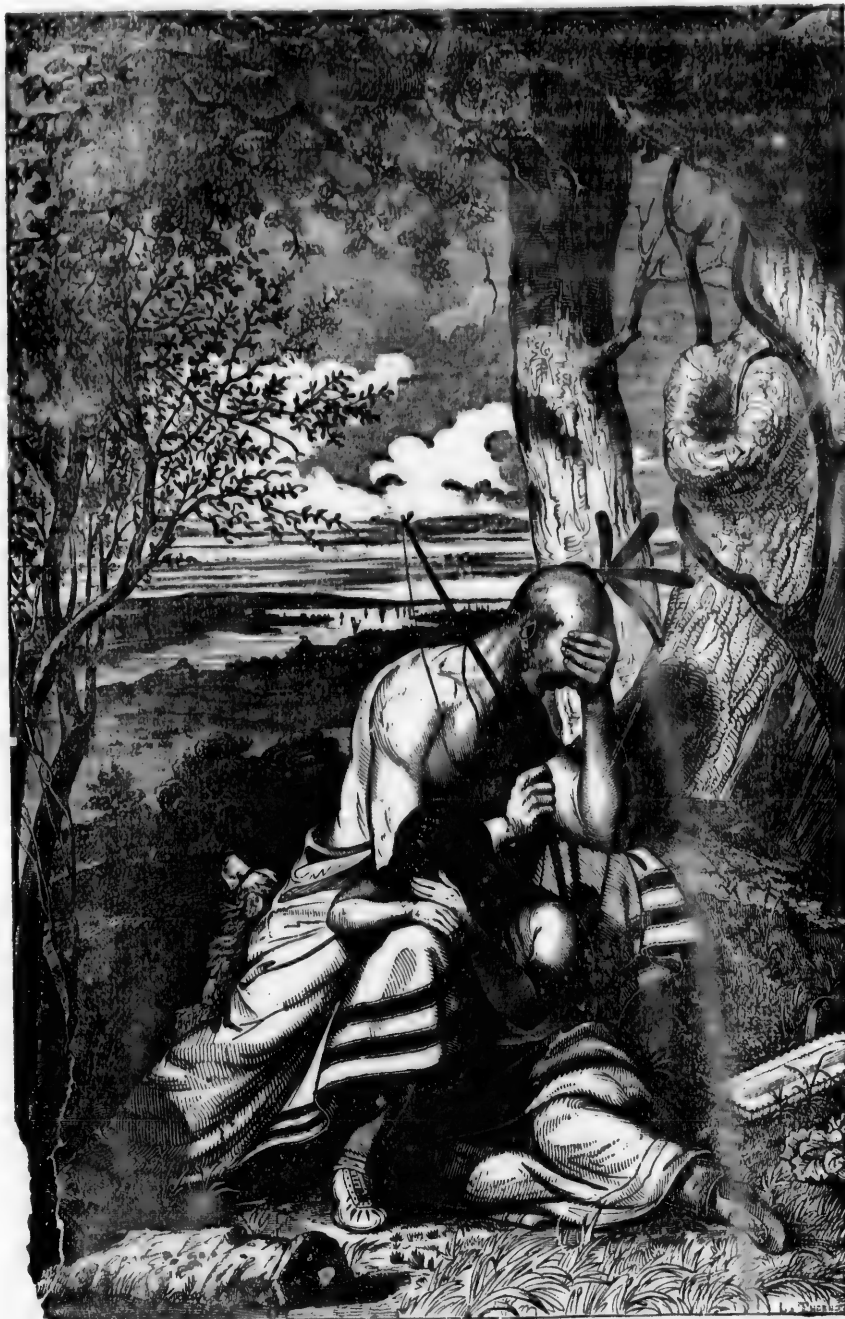
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INDIAN PARENTS AT THEIR CHILDREN'S GRAVE.



The Old Statehouse, or Hall of Independence, Walnut Street Front.

INDEPENDENCE HALL.

THE old statehouse, still standing on Chestnut street, between Fifth and Sixth streets, Philadelphia, is an object of veneration to every American. Prior to its erection, the legislature of Pennsylvania, held their annual sessions in different private houses. In the year 1729, the legislature resolved to build a house for their particular accommodation, and they appointed commissioners, who purchased the lot fronting on Chestnut street, between Fifth and Sixth streets, for the purpose.

The first purchase included only about half the depth to Walnut street. Fronting on that street, were a number of small houses, and on Sixth street corner was a shed, which afforded and was used as a common shelter for the parties of Indians, occasionally visit-

ing the city on business. In 1760, the other half square was purchased, and the whole space included was walled in with a high brick wall. This, in time, gave place to the beautiful iron palisade which now encloses the yard.

This venerable pile is a place consecrated by numerous important occurrences in our colonial and revolutionary history. Its contemplation fills the mind with many associations and local impressions—within its walls were once witnessed all the memorable doings of our patriotic forefathers—above all, it was renowned in 1776, as possessing beneath its dome, “the Hall of Independence,” in which the representatives of a nation resolved to be free and independent.

The style and architecture of the house and steeple were directed by Dr. John Kearsley,

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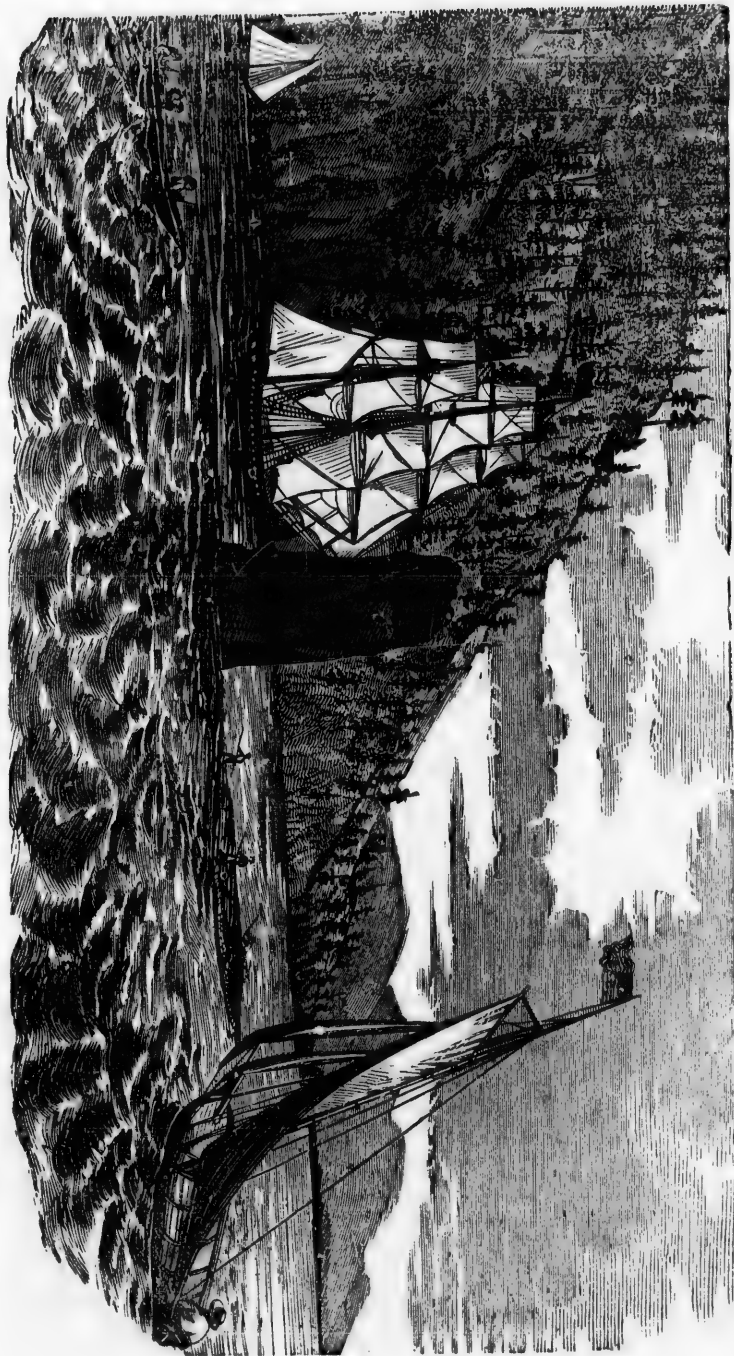
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PILLAR ROCK.



sen., the same amateur who gave the architectural character to Christ church. The carpenter employed was Mr. Edward Wooley. The facts concerning its bell first set up in the steeple (if we regard its after history), has something peculiar. It was of itself not a little singular that the bell, when first set up, should, in its colonial character, have been inscribed as its motto, "Proclaim liberty throughout the land, and to all the people thereof!" But it is still more strange, and deserves to be often remembered, that it was the first in Philadelphia, and from the situation of Congress then legislating beneath its peals, it was also the first in the United States to proclaim, by ringing, the news of the Declaration of Independence.

This bell was imported from England, in 1752, for the statehouse, but having met with some accident in the trial-ringing, after it was landed, it lost its tones received in the fatherland, and had to be conformed to ours by a recasting. This was done under the direction of Isaac Norris, Esq., the then speaker of the colonial assembly, and to him we are probably indebted for the remarkable motto so indicative of its future use.

At the time the British were expected to occupy Philadelphia, in 1777, the bell was taken from the city to preserve it from the enemy. At a former period, say in 1774, the base of the wood work of the steeple was found in a state of decay, and it was deemed advisable to take it down, leaving only a small belfrey to cover the bell for the use of the town-clock. It so continued until a few years past, when public feeling being much in favor of restoring the venerated building to its former character, a new steeple was erected, as much like the former, as circumstances would admit.

Previous to the visit of General Lafayette, in 1825, some dunce in office, who had control of the building, by way of making the room where the Declaration took place more worthy, as he thought, of the nation's guest, for whose use the councils had appropriated it, had all the antique architectural decorations and furniture of the room removed, and caused it to be fitted up in modern style, with new mahogany furniture, tapestry, &c. This silly act was not discovered until too late, and it greatly diminished the pleasing associations that must have thronged the heart of Lafayette, as he stood once more in that sacred hall. The error has been since repaired, so far as it could be, by restoring the hall as far as possible to its ancient appearance. The Declaration of Independence was signed in the lower hall, on the left of the principal entrance, of the main building, as seen in the view.

The regular sessions of the state assembly,

were held for a number of years in this building. The senate occupied a room up stairs. Occasionally these rooms were the scene of splendid banquetings. In the long gallery, where Peale afterward had his museum, the tables were sometimes made to groan with the luxuries of good living.

In 1736, soon after the edifice was completed, his honor, William Allen, Esq., mayor, made a feast, at his own expense, at the statehouse, which was pronounced a most sumptuous and elegant entertainment. In 1756, the assembly gave a great dinner in honor of the new governor, Denny. In 1757, the city corporation gave an entertainment to Lord Loudon, "commander-in-chief of the king's troops in the colonies." And in 1774, when the first Congress met in this city, the gentlemen of the city gave a feast, at which upward of five hundred persons dined.

For many years the public papers of the colony, and afterward of the city and state, were kept in the east and west wings of the statehouse, without any fire-proof security, such as they now possess. From their manifest insecurity, it was deemed expedient some years ago, to pull down the former two-story wings, and to supply their places by those which now are there. In pulling down the western wing, a keg of excellent flints was discovered at the depth of four or five feet, the wood was utterly decayed, but the impression was distinct in the loam ground.—Near to it, Mr. Groves, the master-mason, found the entire equipments of a sergeant—a sword, cartouch-box, buckles, &c. The workmen also dug up, close by the same, as many as one dozen bomb-shells, filled with powder. Two of these, as a freak of the mason's lads, are now actually walled into the new cellar wall, on the south side. But for this explanation, a day may yet come when such a discovery might give circulation to another Guy Fawkes and gunpowder-plot story.

At the head of the article, on page 484, is given a view of the statehouse fronting on Walnut street. It was here that on the eighth of July, 1776, the Declaration of Independence was first read by John Nixon, amid the repeated shouts of the people; the king's arms in the court-room, were taken down and burnt in public; and bonfires, discharges of cannon, and ringing of bells, demonstrated the joy of the people.

The Declaration of Independence was received by all the colonies with satisfaction and joy. The following narrative of its reception in Boston, is from the pen of a British officer who was a prisoner on parole at the time the event took place:—

"On the seventeen of July, the British officers on parole received each a card from

the governor, requesting the honor of his attendance at a specified hour on the morrow in the Town hall. As rumors were already afloat touching the decided step that had been taken at Philadelphia, we were not without a suspicion as to the purport of this meeting, and we hesitated for a while as to the propriety of giving the sanction of our countenance to a proceeding which we could not but regard as traitorous. Curiosity, however, got the better of scruples which, to say the truth, were not very well founded; and it was resolved, after a brief consultation, that the invitation ought to be accepted. Accordingly, at the hour appointed, we set out, arrayed in the full dress of our corps. As we passed through the town, we found it thronged in all quarters with persons of every age and both sexes. All were in their holiday suits, every eye beamed with delight, and every tongue was in rapid motion. King street, Queen street, and the other streets adjoining the council chamber, were lined with detachments from two battalions of infantry, tolerably well equipped; while in front of the jail a brigade of artillery was drawn up, the gunners standing by their pieces with lighted matches; nor, to do them justice, was there any admixture of insolence in the joy which seemed to pervade all classes. Whether long residence among them, and the anxiety which we displayed never wantonly to offend their prejudices, had secured their esteem, or whether they considered it beneath the dignity of a grave people, standing in a position so critical, to vent their spleen upon individuals entirely at their mercy, I do not know; but the marked respect with which we were treated, both by soldiers and civilians, could not be misunderstood. The very crowd opened a lane for us to the door of the hall, and the troops gave us, as we mounted the steps, the salute due to officers of our rank.

"On entering the hall, we found it occupied by functionaries, military, civil, and ecclesiastical; among whom the same good humor and excitement prevailed as among the people out of doors. They received us with great frankness and cordiality, and allotted to us such stations as enabled us to witness the whole of the ceremony, which was as simple as the most republican taste could have desired. Exactly as the clock struck one, Colonel Crafts, who occupied the chair, rose, and, silence being obtained, read aloud the declaration, which announced to the world that the tie of allegiance and protection, which had so long held Britain and her North American colonies together, was for ever separated. This being finished, the gentleman stood up, and each, repeating the words as they were spoken by an officer, swore to uphold, at the sacrifice of

life, the rights of his country. Meanwhile, the town-clerk read from a balcony the Declaration of Independence to the crowd; at the close of which, a shout began in the hall, passed like an electric spark to the streets, which rang with loud huzzas, the slow and measured boom of cannon, and the rattle of musketry. The batteries on Fort Hill, Dorchester Neck, the castle, Nantasket, and Long Island, each saluted with thirteen guns, the artillery in the town fired thirteen rounds, and the infantry, scattered into thirteen divisions, poured forth thirteen volleys, all corresponding to the number of states which formed the Union.

"What followed may be described in a few words. There was a banquet in the council chamber, where the citizens appeared and appropriate toasts were given. When night closed in, the darkness was effectually dispelled by a general and what was termed then a splendid illumination. I need not say that we neither joined, nor were expected to join, in any of the festivities. Having sufficiently gratified our curiosity, we returned to our lodgings, and passed the remainder of the evening in a frame of mind such as our humiliating and irksome situation might be expected to produce."

It was ascertained by Dr. Maese, in a correspondence with Thomas Jefferson, that the Declaration of Independence was written by him, at his private lodgings, in the house of a Mr. Graaf, which was situated on the southwest corner of Market and Seventh streets, Philadelphia.

MEMORY.—The great point in cultivating the memory is to gain command of the attention. A habit of continued, unrelaxing attention, especially if acquired in early years, is the foundation of a good memory. A habit of attentive thought is better than all the artificial memories ever contrived. To the formation of such a habit, sufficient efforts have not often been directed. Therefore it is that we hear many persons complaining of the want of memory. They can not remember the lectures, sermons, and addresses, which they hear, nor the books which they read. All seem to run through their minds like water through a sieve. They were entertained, and even edified, they would say, but ask them to state what it was that entertained and instructed them, they can not tell. Close attention, or rather persevering effort to give close attention, will help even such a memory. The too common practice is to attempt to fill the storehouse of the memory before a foundation is laid, or a habit of attentive thought is formed.

AMHERST COLLEGE,
WITH THE
NEW CABINET AND OBSERVATORY.

AMHERST COLLEGE, one of the principal literary institutions in Massachusetts, and even in the United States, occupies a delightful and healthful situation, on the summit of the bold ridge of land on which the town is situated whose name it bears. The ground, rising with a fine swell from near the eastern bank of Connecticut river, affords fine views on every side, over a surface varied by similar ridges, and by alternate fields and forests, villages, farms, and gardens. Northward rises the long, gentle, and commanding ridge of Pelham; and a few miles south are the celebrated twin peaks of Mount Tom and Mount Holyoke. The surrounding country is not less interesting for its history, than for the industry, intelligence, and morality, of its inhabitants; and in all branches of improvement, the college has exerted a powerful influence far beyond the limited horizon.

The three college buildings, one of which is seen, in all its length, on the right side of our print, are fine, substantial edifices. That which is most distinctly visible is four stories high, with a Doric portico projecting from the middle, and a dome rising from the centre of the roof. Toward the left are the new buildings, lately erected for the cabinet of natural history and the astronomical observatory, while a cluster of dwellings, with a church in the midst, and a number of scattering houses, show the elevated and agreeable situation of the southern part of the village.

Amherst college was founded in 1821, incorporated in 1825, by an act of incorporation by the legislature, and now contains one hundred and sixty-six students. The Rev. EDWARD HITCHCOCK, long distinguished as the professor of geology, &c., was elected in 1843 as the successor of the president, Dr. HUMPHRIES, and ably occupies his station.

There are professors of rhetoric and English literature; mathematics and natural philosophy; chemistry and natural history; Greek and Hebrew; zoology and astronomy; intellectual and moral philosophy; and Latin and French. There are also three tutors, a preceptor in German and French, and a lecturer on political economy. There are three vacations, viz., one of four weeks, from the commencement, one of six weeks, beginning on the Wednesday before the state thanksgiving-day, and one of three weeks, from the third Wednesday in April.

The expenses are—for tuition, \$10 each term; room rent, \$2 do.; recitation rooms, &c., \$2 do.; fuel and lights, from \$9 to \$11.

The lowest terms for board, in companies, is \$1 a week, and the highest, in families, \$2. Good board, in families, may be had for \$1.50. A number of indigent students are in part provided with furniture.

The libraries of the college and literary societies contain about 15,000 volumes. The college library is accessible to all the students. The north, middle, and south college buildings are capacious, convenient, and situated in a manner highly favorable to appearance.

At the dedication of the new cabinet and observatory, on the 28th of June, 1848, a large number of distinguished men attended, and addresses were made by the president, Hon. Wm. B. Calhoun, Professor Silliman, Professor Shepherd, Wm. C. Redfield, Esq., and Dr. Worcester. The pamphlet containing an account of the proceedings, contains some interesting facts and dates connected with the history of science in the United States, with many enlightened sentiments, honorable to the assembly from which they proceeded. Due acknowledgments were made to the liberal patrons of the institutions, who at different periods had rendered it essential aid from their estates; and gratifying evidence was afforded by a recapitulation of contributions and donations received within a few months, that its character and usefulness are more highly appreciated than ever. The president paid a most appropriate and well-merited compliment to one of the principal benefactors,* in the following words: "In the astro-

* It appears that the most liberal individual donation during the past year, to Amherst college, has been made by the Hon. DAVID SEARS, consisting of real estate in the city of Boston, estimated by the donor to be of the value of \$12,000. This, with \$10,000 formerly bestowed, is to constitute the "Sears' Foundation of Literature and Benevolence," which, although for the present it does not yield a large income, yet such are the terms on which it is bestowed, that it must ultimately become of great value to the college. To the benevolence of the same individual, we believe, the astronomical observatory at Cambridge owes its existence.

Among the letters received at the dedication of the new cabinet and observatory of Amherst college, was an instructive and interesting one from Mr. Sears, which takes a broad and very just view of the relation of colleges to the prosperity and advancement of the community. "In my humble opinion," says he, "our colleges are the great conservatives of the Union." So long as money is freely spent in support of the church, the school, the college, the hospital, and the asylum, for memorials of the departed good and great, for the sustenance of the poor and the comfort of the prisoner, there is little fear of its being greatly misapplied in luxurious extravagance or vicious indulgences. It is not to be heard of with the passion of a miser, but to procure to ourselves the advantages which can not be obtained without it—the cultivation, the improvement, the luxury of doing good, which are the stimulus, the means, and the reward of virtue. It is Boston's great honor that among her citizens there are so many who understand the use of money.—*New York Evangelist*, Oct. 19.

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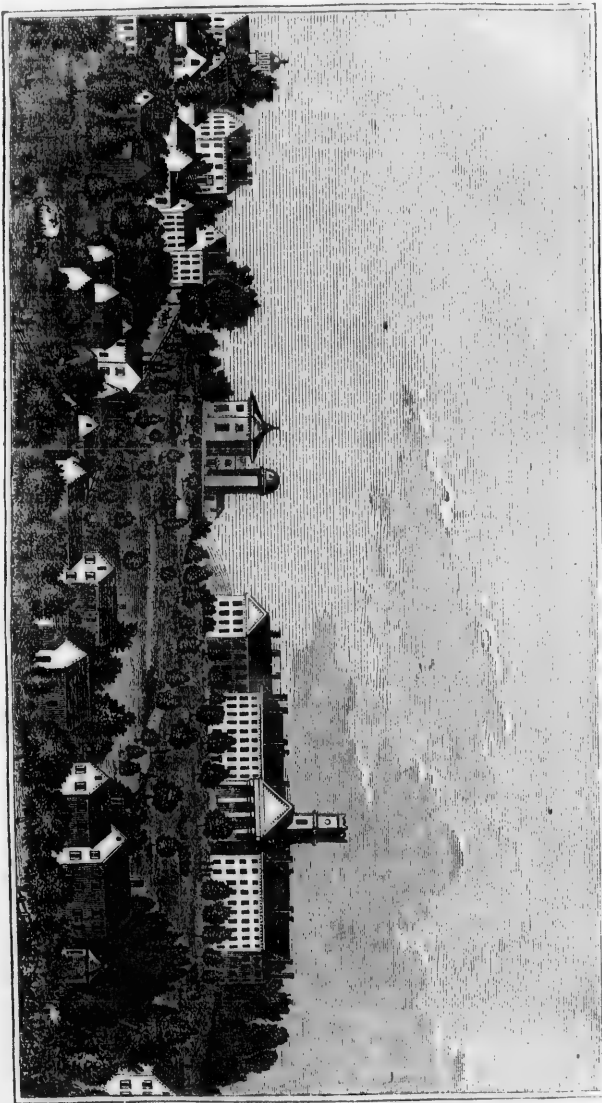
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View of Amherst College, with the New Cabinet and Observatory, from the Southwest.



nomical observatory at Cambridge is a massive tower, built solid of Quincy granite, called the 'Sears' Tower,' which sustains one of the most splendid telescopes in the world. But in the 'Sears' Foundation of Literature and Benevolence' in Amherst college, we have a more enduring structure: 'monumentum aere perennius: imo vero etiam, saxo perennius.' A letter from Mr. SEARS, of Boston, was read, containing the following paragraphs:—

"It is the peculiar characteristic of Massachusetts to give encouragement to learning, and to cherish her literary institutions. It is a sentiment which has grown with her growth, and strengthened with her strength, and almost marks her as a distinct people. From the landing of their forefathers, in 1620, to the present day, her sons—while differing on other subjects—have thought alike on this, and they have reason to be proud of the result.

"The colleges of Massachusetts are aptly called seminaries of learning, for by them the seeds of knowledge, of virtue, of morality, and religion, are sown broadcast through our land. Go where you will, from Maine to Mexico, from Ohio to the Pacific ocean, and much of what you find among the people that is good and honest, intelligent and successful, owes its origin to the loins or education of New England—and principally of Massachusetts. In my humble opinion, our colleges are the great conservatives of the Union, and we are deeply indebted to them for whatever of honest principle and integrity of character exists among us."

"Especially permit me to notice the observatory, and the liberal and enlightened gentleman whose name stands the first on the list of patrons.* I trust that the foundation thus laid by him will hereafter sustain the instruments of modern science to draw from the skies a knowledge of the stars—to demonstrate to men the glory of God, and the magnificence of His works—and show to their wondering minds, that "the thousand brilliant worlds which circle round Him, are governed by one law, and that in wisdom 'He has made them all.'"

"I venture to conclude my answer to you, reverend sir, with the following sentiment: Literary talent, and pecuniary ability, may their zeal be ever found united in building up the halls of learning, and extending the altars of religion."

The Wood's Cabinet is of brick, of an octagonal form, and forty-five feet in diameter, with two lofty stories. It is stuccoed without as well as within; and the two halls which it contains are ornamented with fresco painting. Great care has been taken to render this

* HON. ABBOTT LAWRENCE.

building secure from fire. The floors are fire-proof, the upper one is supported by four strong iron pillars, and the doors are of iron, weighing nearly half a ton each.

The Lawrence Observatory is an octagonal tower, forty-four feet high and eighteen feet in diameter. It is surmounted by a dome ten feet high, which is so made as to be easily moved round to the right or left, for the convenience of observers using the telescope. As in the observatory at West Point, &c., the dome rests upon several cannon-balls, placed between large iron hoops, or circular trackways, which perform the part of wheels. The telescope is to be supported by a pedestal, or column, of brickwork, capped with stone, which rises from the ground to the summit of the tower, and an opening is left in the dome through which the telescope may be pointed. The institution is not yet provided with this important instrument; but it is hoped the munificent friends of science in the state will not long allow the observatory to remain destitute.

The Transit-Room is in a small wooden building, connected with the observatory, and contains the fine transit instrument belonging to the institution, which was purchased in Paris by Professor Hovey, a long time since, together with the astronomical clock. This room has an opening through its roof, from the north to the south, to allow observations to be made on all parts of the meridian.

A vestibule of two stories connects the observatory and the cabinet, and contains the staircases leading to the different apartments of both. The situation of all may be clearly understood by a glance at the print. We now return to the former building, to speak of the valuable collections of specimens which it contains, although their numbers and the descriptions necessary to make them fully understood by a common reader, will prevent us from attempting anything more than a very general sketch. It is, however, proper to mention here, that this building does not contain all the specimens in natural history belonging to the college. The zoological cabinet is to be seen in the old apartment; and there the visitor will find a complete series of animals, exhibited in cases on the walls, from the human species down to the zoophytes. The large and highly valuable collection of shells and insects, recently presented to the institution by Professor Charles B. Adams, occupies tables on the floor of the same apartment, and also that of the library, of which we can only remark here, that the number of shells amounts to five thousand, and that of insects to several thousands.

To speak of the numerous and interesting objects displayed in the new cabinet: The

lower hall is devoted to geology, and contains 11,500 specimens of rocks and minerals, and fossils associated with them, arranged in fourteen distinct collections. The visitor, on entering the door, finds them presented in the following order, and so marked that, with the help of the printed catalogue, he can easily understand what stratum and what country each is intended to represent or to illustrate.

1. *The Rocks of the European Continent.*

—These are illustrated by six hundred specimens of rocks and fossils, about three inches by four in size, whose names are printed behind them in English, French, and German. This collection, which was put up at the Heidelberg Mineralogical Institute, affords the best imaginable means for studying the rocks of Europe. It is remarkable that the sandstones and some of the petrified fishes which they contain, almost exactly resemble specimens from the Connecticut valley.

2. *The English Rocks.*—Among the six hundred specimens in this collection, generally small, is a very instructive series of the chalks and the Wealden group. The latter is from an ancient estuary in the southeastern part of England, where the iguanodon and other enormous reptiles once lived, as is proved by their bones.

3. *The Missionary Collection.*—These specimens, amounting to about twelve hundred, have been collected and presented by American missionaries, in many different countries and some of the most interesting sites in the world chiefly in Asia; and, although not generally intended to illustrate geology, are often valuable in that point of view. Two thirds of the individuals who contributed these to the institution are of the number of its graduates.

Among the interesting facts proved by the specimens in this collection are the following: That limestones form the prevailing rocks along the borders of the Mediterranean; and some of them are composed of shells, so small as to be invisible to the naked eye, of the kind called polythalamia; and others abound in petrified fishes, &c.

Most of the limestones of the Holy Land have been referred to the chalk formation, and, as might therefore be expected, often contain flints, hornstone, jaspers, and agates. Of these there are specimens from Lebanon, Anti-Lebanon, Carmel, Beyroot, Tyre, the Mount of Olives, and the garden of Gethsemane. Petrified fishes and some of the lower animals abound in Mount Lebanon; and of these one hundred and nine specimens are to be seen in the collection. Professor Fiske found oysters and clams on summits thousands of feet above the level of the sea.

Numerous fragments of ancient Greek and

Roman edifices are also displayed, from different cities and other localities in Asia, Greece, Italy, Africa, and the islands, as the Colosseum of Rome, the Acropolis of Athens, the temple of Juno, in Samos, of Apollo, in Cnidus, Pompeii, Carthage, Samaria, Persepolis, the seven churches, &c., &c. Specimens of rocks from Mount Olympus are almost the only ones in this collection corresponding with those of New England. Many volcanic specimens also are to be seen, from Asia Minor, Italy, the Sandwich islands, &c. Rock salt from the Red and Dead seas; bottles of water from these and other celebrated sources, and other objects we might particularize.

4. *The West India Collection* comes next in order, and consists chiefly of recent petrifications from St. Croix and Antigua, presented by Professor Hovey. Most of the species correspond with living ones. Beautiful specimens of petrified wood show all the fibres and vessels of the different kinds of timber, converted into stones of extreme hardness.

5. *Rocks of the United States.*—Here is a very instructive series of fifteen hundred specimens, the first twenty-seven of which are the stones of which all our rocks are composed, and therefore called the *Alphabet of Geology*. Among the fossils are the tooth of the ancient large American horse, found in Amherst, whose remains are also discovered on the Mississippi and elsewhere; and teeth and bones of mastodons and mammoths, sharks fifty or one hundred feet long, &c. About one hundred and fifty specimens are from our coal regions, which occupy an area of about one hundred and fifty thousand square miles; and these present many interesting impressions and fossils. One part of this collection is eminently of practical importance, viz., two hundred and twenty specimens of soils, clays, marls, &c., from different parts of Massachusetts. Among other objects is a piece of the green hornstone rock from which Shay's soldiers supplied their muskets with flints, in his rebellion. Another specimen proves that plants, analogous to some of those of the tropical regions, once grew in Massachusetts. This is a large petrified reed, with several joints, dug up at Seekonk.

6. *Massachusetts Rocks.*—This collection was made during the geological survey of the state, between 1830 and 1846; and embraces a large number of clay-stones, the only considerable assemblage of these curious concretions anywhere to be seen. Serpentine, marbles, syenites, porphyries, and other ornamental stones of the state, are here exhibited, cut and polished; and their various colors and brilliant surfaces afford a surprising variety, considering the limited region in which they have been found.

7. *Rocks and Minerals of Connecticut*.—Eight hundred specimens, presented by Professor Shepherd, much resembling those of Massachusetts.

8. *Rocks and Minerals of Vermont*, collected by Professor C. B. Adams, while surveying that state.

9. *Fossils of the Paris Basin*, containing one hundred and twenty-four species of organic remains.

10. *Marbles, Alabasters, &c., from Rome*.—One hundred and seventy-two polished specimens.

11. *Organic Remains from Europe*.—Five hundred specimens—highly useful to students.

12. *Fossil Footmarks, &c.*—In this department, as might be expected, the collection is peculiarly rich; President Hitchcock having, while a professor, first brought this curious and important branch of geology to the knowledge of the world. Here we find two hundred and fifty specimens of footmarks, among which we can particularize only a few. The largest are the tracks of the giant animal *brontozoum*, an enormous bird, something like, and with a foot three or four times larger than, the ostrich. There were three tracks of this monster, fifty-four and fifty-six inches apart. The depressed track of another will hold more than a gallon of water. The other foot-prints, indicating more than forty different species of animals, chiefly birds, we have not room to mention; but they are well worthy of attentive study. Most of them are from the sandstone rocks of the Connecticut valley; but some are from other states and transatlantic countries.

The *Shepherd Cabinet* occupies vertical cases, ranged against the walls of the upper hall, and is divided into meteoric substances, mineralogy, and geology. The first of these are numerous, and from many different parts of the world. The other portions of this collection are also well filled, as might be expected from the science and experience of the collector.

THE NEW HOUSES OF PARLIAMENT.

This long range of edifices presents an imposing aspect to the stranger, as he passes up the Thames, and turns his eyes to the spot so long occupied by the old parliament houses. They were accidentally destroyed by fire on the 16th of October, 1834. The present enlarged edifice soon rose from the ruins, and affords much more ample and convenient accommodations to the two houses of parliament, the library, and the various minor purposes connected with them. The origin of the con-

flagration is a matter of much uncertainty; but it was supposed to be accidental. A large quantities of old and useless papers had been burnt in the Exchequer, which, it was supposed, might have been too hastily crowded into the fireplaces, and over-heated some of the chimney-flues. The mere destruction of the main building itself might not have been much regretted, as it made room for the present superior structure: but numerous valuable documents were consumed, and the admired old painted chamber, the tapestries, &c., in the house of lords, and, above all, the adjoining ancient chapel of St. Stephen, were also ruined. This last had long stood as the most perfect specimen of the highly ornamented Gothic style of architecture in the kingdom, and was respectable and valuable also from its historical associations.

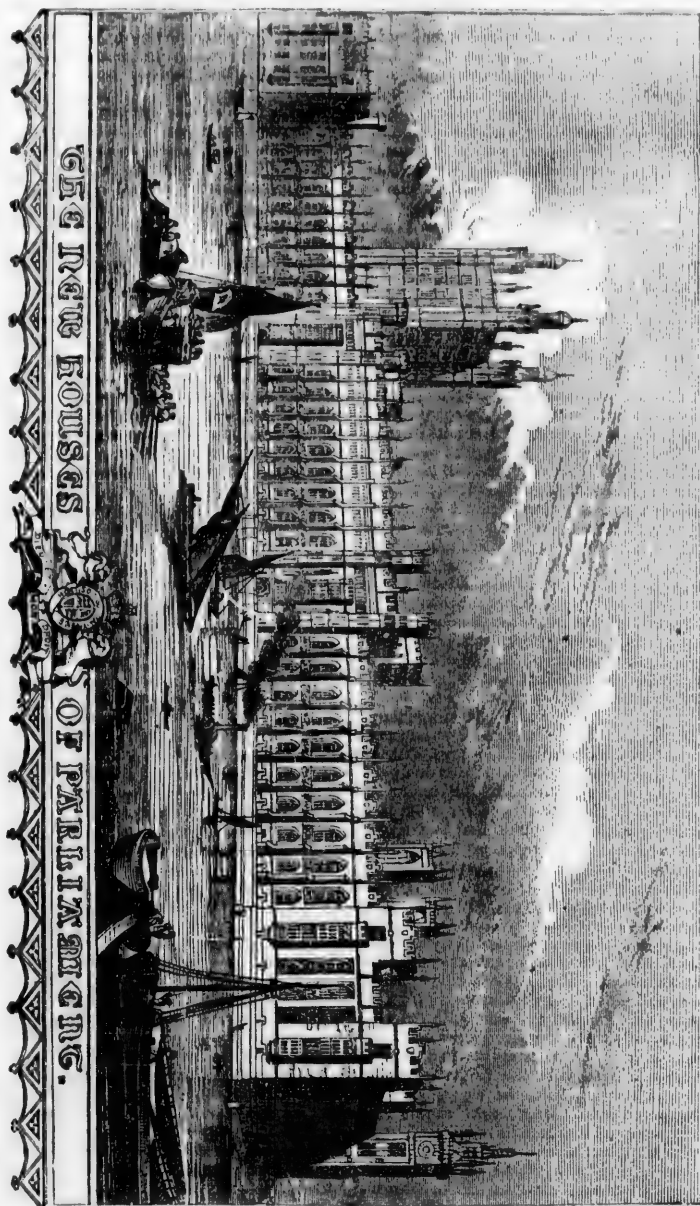
Westminster cathedral, which stands in this vicinity, was the first of the ancient edifices which are here clustered together. The superstitions inculcated by the Romish priesthood have always filled the heads of all people, foolish enough to listen to their fictions, with ideas of the superior sanctity of the objects, buildings and places which the pretended miraculous power of themselves or others has distinguished. There, as in many other places and countries, consequence was given to the place where the ground was called holy, and a host of images were congregated, and daily worshipped. King Canute, though a Dane, became a dupe of the priesthood, and in his later days, fixed his residence under their wing, being the first king who occupied this site. The building which he inhabited was destroyed by fire in the time of Edward the Confessor, who, a bigot of the blindest kind, built another palace near the same spot; and his successors continued to occupy Westminster palace, until the reign of Henry VIII. in 1529, when another fire occurred by which it was destroyed, and Whitehall became the royal residence.

The origin of the parliament of England is lost in the gloom of the dark ages. It is believed that the representatives of the people formerly met with the lords in the great national hall of legislation; and that the body was first divided in the year 1377. Conflicts innumerable were waged, from the earliest days of English history, between the people, the nobles and the monarchs, often influenced, instigated or directed, more or less covertly by the priesthood, to whose interference in public or private affairs, directly or indirectly, a great part of the history of England was materially affected, in almost all ages, as every intelligent reader must plainly see. The reformation put an end to the old system: but some of its evil features were retained,

of much uncertainty; accidental. A large number of papers had been lost, which, it was supposed, were too hastily crowded over-heated some of the mere destruction of might not have been made room for the preservation of numerous valuable documents, and the admired tapestries, &c., in which, above all, the admiral of St. Stephen, were had long stood as the most highly ornamented structure in the kingdom and valuable also as national monuments.

Whitehall, which stands in the midst of the ancient edifices destroyed together. The palace was built by the Romish priests, the heads of all people, to their fictions, with the sanctity of the objects, which the pretended themselves or others were, as in many other instances, consequence was given to a ground was called Whitehall, where the king and his court were congregated, King Canute, though the head of the priesthood, and his residence under the first king who occupied which he inhabited the time of Edward the Great, the bigot of the blindest superstition, near the same spot; he used to occupy Whitehall during the reign of Henry VIII. The fire occurred by which Whitehall became the

Parliament of England during the dark ages. It is the representatives of the people in the great national assembly; and that the body of the nation met in the year 1377. Conflicts between the people, often influenced, more or less covertly, by those interference in the directly or indirectly of England was most all ages, as even the plainest see. The old system of government was retained,



which have ever since exerted unhappy influences in parliament and on the nation. Among these are the church establishment and the civil power of ecclesiastics. Under the dispensations of Divine Providence good often results from evil; and the dictatorial spirit of the English bishops, proceeding to persecution, soon commissioned the pilgrims to lay the foundation of a new republic on Plymouth rock.

Such reflections as these, and others, in an endless train, naturally crowd into the mind of an American, as he stands to contemplate the site of the British parliament.

THE BOSTON WATERWORKS.

THIS noble monument of the liberal enterprise of Boston in everything conducive to the general health or comfort of its citizens, was briefly noticed in a previous article on the first settlement of that city. But the prescribed limits and general design of that article did not permit that detailed description of this gigantic work which its merits would justify. The following well-written description of a "visit to the waterworks," was published in the Boston Daily Advertiser, by permission of the gentleman to whom it was addressed. It furnishes much information in relation to the aqueduct, particularly the more distant portion of it. We cheerfully give it a place, confident that its interest will amply vindicate its insertion.

BOSTON, Nov. 3, 1846.

DEAR SIR: You ask me to give you some account of *a day among the waters*, and I do so with great pleasure, for it was a day of deep interest and perfect satisfaction.

You know that I was not originally in favor of the project, when first started, of bringing lake or river by an artificial channel into this city of springs and water-brooks, because the necessity for it was not obvious, while the cost was certain, and in the then condition of our city, somewhat alarming. But the condition of things greatly changed. The city grew more populous, and pure water less abundant. There was a more pressing want, and much larger ability to meet it. It was a gigantic effort to be sure, but it comported with the enterprise, the energy and the wealth of our community; and I joined heart and hand with the gallant company, when in August, 1846, the city government commenced its first operations at the lake. Two years and two months only have elapsed and the water is here. We have seen it throwing itself eighty feet in the air, in a form of inimitable strength and beauty, and

flowing in a quiet and regular stream under the eaves of one of our principal hotels, at nearly the highest habitable residence in the city.

It is here—in a time so surprisingly short, that they who were fearful it would never be brought here at all, are compelled to give a new direction to their inquietude, and to distrust the permanency and solidity of the conduit by which it is conducted to our dwellings.

Let me assure you that, so far as my humble judgment may be of any value, the work has been brought to its present successful and speedy result by the exercise and the development of high scientific and profound artistic skill, and owes the rapidity of its progress to a combination of intellectual and physical powers, which will be as honorable to our community as are the enterprise and liberality in which it was projected.

I have had some opportunity of seeing many similar operations, but none with which this will not compare very favorably, whether the comparison be made in regard to the time, the labor, or the skill.

In regard to the expense, it becomes one to speak with less decision until the accounts are all posted—but it is most obvious that so far as the works meet the eye of an observer he will not fail to admire the judicious combination of strength and beauty with an elegant taste that does justice to the laudable pride of our people, and with a severe and classic simplicity which has wasted nothing in superfluous ornament.

It was on one of the finest mornings of our Indian summer that a ride of an hour in the cars of the Worcester railroad brought me to the margin of Lake Cochituate, and to an acquaintance with the intelligent superintendent of the works there—Mr. Sickles. The margin of this beautiful sheet of water is cleared of its under-brush and vegetable matter, and the bright and pellucid stream seemed to indicate the utility for which it is destined. Great labor has necessarily been bestowed upon the grounds, so as to give a proper rise to the water, which passes to its new destination through receptacles covered by a stone gatehouse, in which these are contained. A coffer-dam which had been built at considerable expense for the purpose of constructing these receptacles was in process of being removed, and much of the under-ground construction will be for ever out of sight.

I am not aware that there is anything peculiar in these constructions at the lake. Yet here as everywhere else in the course, science had its high duty both in giving a proper direction and descent to the stream, in anticipating and guarding against accidents, and preserving the current in a continuous flow,

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so that when, by time or chance, renovation or repair may be required, it may be readily made. Unskilful men had surmised that even here there was a great fault and that the water would either not flow at all, or flow too slowly on its way. The first experiment proved the correctness of the judgment of the engineers, and demonstrated also that a swift course would have diminished the height to which the water would rise in the city, besides endangering the safety of the aqueduct. All here is stone or iron. No less durable material is admitted, and ages long as those in which this water has slept in its tranquil bed must again revolve, before, by the common occurrences of time, these works will be subject to decay. My attention was drawn to the mighty power which man must hold in his hand over so great a volume of waters when he sends them on a new destination; I was attracted to a consideration of the resistless force which even this quiet lake exercises over the tributary stream that is drawn from it during all the long errand on which it is sped; and how this force is measured, meted out and controlled by those contrivances of human intelligence which is a gift to man from the goodness of its Creator, and I assure you of the gratification I felt at that vast exercise of genius which thus comes in competition with Nature herself and makes her established laws obedient to the welfare of our race.

The water after leaving the lake is carried in an underground aqueduct eight miles to the margin of Charles river. The stupendous labor of this grand construction from the lake to the river is now in a great measure for ever buried up, but the inequalities of the natural surface of the earth show you where it is carried below and where, notwithstanding its regular and gradual descent, it rises above the common highway. There are two remarkable points of elevation, one where the aqueduct is carried over the county road upon a stone arch spanning the road from side to side—the other where it arrives at the margin of Charles river and is made to descend and rise again through two inverted siphons, the capacity of which is large enough for the required supply of the estimated population of our city for twenty years. A provident forecast has prepared the means of adding, at comparatively small expense, one third more to the present means, whenever it is required. On each side of the river, where these siphons are connected with the aqueduct, are gate houses of stone, within which are such arrangements as enable the superintendent to control the reception and delivery of the water, in part or in whole, at his pleasure; and below the bridge a waste weir enables him to turn its whole current into Charles river when-

ever it is desirable to inspect the interior of that dark channel through which the lake is now taking its gentle but compulsive course.

It was my object to examine these ingenious and curious constructions, in which science and mind triumph over inert matter and control the elements even in their rage. Under the care and with the aid of the chief engineer, Mr. Chesbrough, I had the most favorable opportunity for a critical and efficient inspection, with every means of illustration necessary for the purpose, and I sat down with an intention of giving you the details of contrivances so simple that they seem perfectly easy, and so efficient that they are completely successful, and yet withal are absolutely the result of a deep knowledge of the laws of hydrodynamics in all their extent and modern improvement; but I feel that, without models or diagrams, it would be impossible to give you a clear impression of the exceeding beauty of the design or success of the execution—and you must either go yourself with the advantages which I had, and examine the construction with your own eyes, or take my word for it that not Boston only but Massachusetts and New England will be proud of this structure as one of the noblest monuments of civil architecture existing in the country.—The resident engineer intrusted with the immediate direction of this portion of the work, was Mr. McKean.

In addition to the parts of the work of which I have already spoken, there are several waste weirs, four I think, with suitable neat stone buildings to protect and preserve them. You understand by a waste weir a construction to let off, by a lateral outlet, any quantity of water which rises in the aqueduct above an ascertained level, and by which also the water may be lowered beneath the standard level whenever circumstances may require.

These are constructed with great care and skill of stone and iron materials, and the gates are moved with surprising ease in their grooves, by cranks operated by hand at the surface of the ground.

They present a handsome appearance on the road, and are admirably well adapted to their purpose.

Of the two reservoirs beyond the limits of the city proper, and the huge and yet unfinished structure within it, nothing need be added to the general remarks made on the whole line of work. They are built for posterity, for ages of future time, when the country and its inhabitants shall have changed in all its institutions and character; and travellers, in some far-away centuries yet to come, will look upon these gigantic ruins of a lost people as the present generation admire the vast tu-

muli of the western states, without knowing by whom or for what purpose they were built. Governments may be overturned—generations of men may fall—the race may disappear from its original place on the globe; but the monuments of human skill, and the accomplishments of human intellect outlive the records of history and the ravages of time.

The object of all this labor and expense is not to bring merely water, but *pure* water—water fit for the comfort, the wants, the health and the luxury of the masses—water which may be drank without injury, and in which men, women, and children, may wash and be clean.

Such was the water of this peninsula in the days of Blackstone, when he lived in a solitary house not far from "Fountain Basin." It has long ceased to be so with a great part of the water in daily use. Such deterioration is common in a crowded and growing city. The new stream is now pure at its source, and may be kept so. Care is taken to preserve its crystal character from all manner of stain. Its sources will be supplied from the heavens, and it will flow safely to and from the bosom of the lake. It comes from a depth not reached by superficial impurities, and is covered in its progress from everything that defileth.

Such is this great blessing for which we owe so much to Heaven, and, by the blessing of Heaven, are much indebted to man. There has been a great duty imposed on those who have the oversight of this immense work. It has involved an amount of labor of mind, of responsibility and care, beyond the proportion of ordinary public service.

In this country there was great want of practical experience on such subjects, and the science itself everywhere needed the sanction of success to confirm its most plausible theories. Sleepless nights and watchful days have been devoted to its accomplishment, and, thus far, not only without any serious mistake, but with the proudest satisfaction of overcoming seen and unseen difficulties, and bringing the whole design to the happiest result.

It is to be hoped that the future participation of this copious stream will confirm all the blessings it is expected to bring with it.

Very truly, Your Friend,

C—

An allusion is made in the early part of the above letter to the beautiful fountain, springing from what has long been familiarly known as the "Frog-pond," on the Common. This fountain is composed of several jets, all of them of great beauty, but the grandest and most admired is a jet of six inches in diameter, rising gracefully from the surface of the pond, and throwing a brilliant silver column of water to the height of eighty feet. No

shaft of polished marble can equal this column in beauty, nor the softest down of the most graceful feather compare in delicacy to its fall, when the water turns from the summit and descends in a splendid curve, here and there striking the column in its descent, and rebounding from it in glittering sparkles, as if it had struck against the hardest granite. This jet is, probably, the largest and highest in the world; it certainly is the most splendid in New England.

THE BOWLING-GREEN.

A RAPID increase of population, the natural consequence of great commercial prosperity, has left but few green spots to cheer the eye amid this artificial wilderness of brick and marble. Of these, the Battery, Bowling-Green, and the Park, are all that exist in the business part of the city. The peculiar beauties and attractions of the Battery, heightened as they are by local circumstances, are familiar to all our citizens, and daily become a theme of eulogium in the mouth of every stranger, especially of such as approach the city by water; and its history is too intimately connected with that of our revolutionary struggle, to require a single remark. But the modest Bowling-Green (a view of which is given on the opposite page), is involved in somewhat more obscurity, from which it is our present purpose to rescue it; a task in which we feel the more interest, as there is some reason to hope that it may some day become the site of a magnificent monument, the ornament and pride of that section of the city.

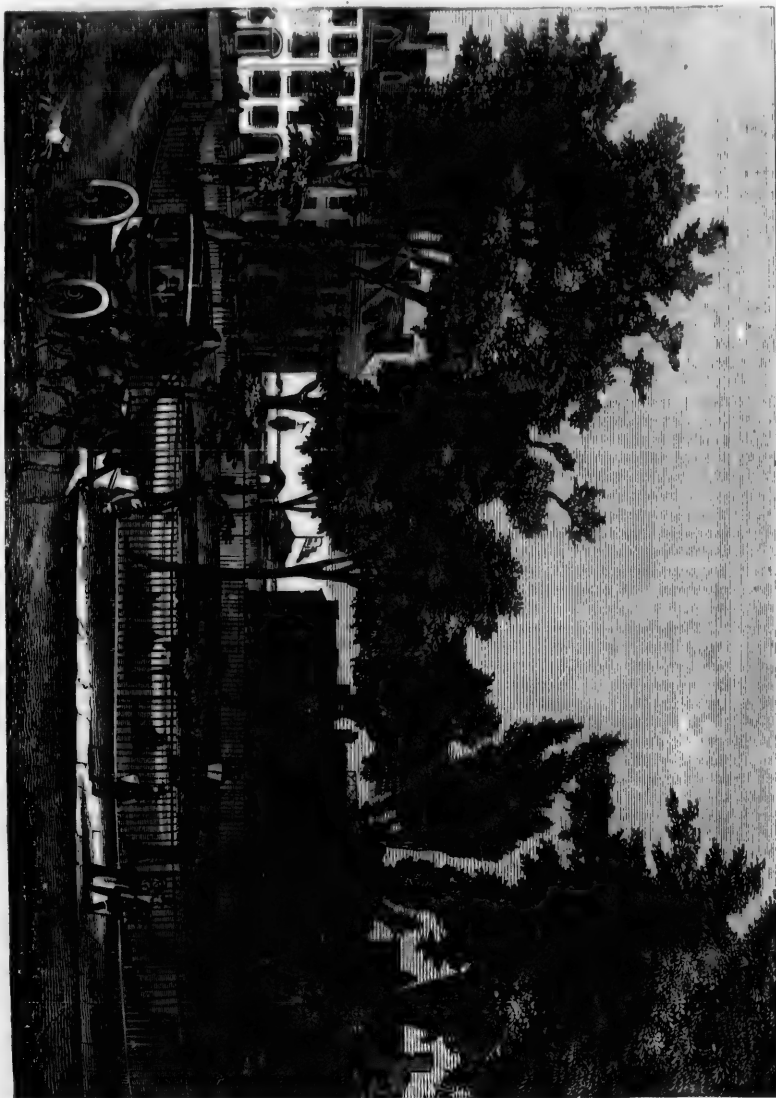
Historians inform us that in the year 1620, King James I. gave the Dutch permission to build some cottages on the banks of the Hudson, for the convenience of their vessels engaged in trade with Brazil; and that, under this license, they settled a colony, and erected a strong fort on the southwestern point of the island Manhattan. This fortress was called Fort Amsterdam, which was indeed the name given by these first settlers to the whole island. But more than half a century afterward, when the English had by treaty obtained permanent possession of the country, the name of the colony was changed to New York, in honor of the original patentee, the duke of York, brother to Charles II. Whether the fort was altered, improved, or entirely rebuilt, by the English, we are not informed; but early in the reign of George I. we find a fortress, on the same site, denominated Fort George, within the walls of which was the governor's residence, the secretary's office, and a house

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THE NEW YORK LEWING-GREEN.



of worship, called the King's chapel; which buildings, together with an extensive range of barracks and stables outside the walls, were all destroyed by fire at the commencement of the celebrated negro plot, in the year 1741.

Fort George stood at the lower extremity of Broadway, on a commanding eminence, which has since been levelled; its former site being now partially occupied by a row of handsome brick buildings, south of the Bowling-Green, and fronting on State street. The original position of the southwest bastion of this celebrated citadel was designated, not many years since, by a marble monument, erected for that purpose, near the centre of the Battery promenade. Why a landmark of so much interest to the antiquary and historian has been since removed or destroyed, we are at present unable to say; we only know that "it was, and is not."

In front of the fort was an open field, where the colonial soldiers used to parade, and which, from its proximity to a market, was subsequently denominated "Market Field." Hence the derivation of Marketfield street, recently and more appropriately changed, by the corporation of this city, to that of Battery place. This field was first enclosed with a plain pale-fence, of irregular oblong figure; which, lying directly in front of the fort, was anything but an ornament to the eye of those who approached the governor's mansion within the walls. A part of this field now constitutes the Bowling-Green, which derived its appellation from having been appropriated, as a place of amusement, to the game of "bowls," more commonly called "nine-pins."

During the riotous proceedings which took place in almost every part of the country, in opposition to the celebrated stamp-act, this spot was selected by the whigs of New York for the scene of one of their patriotic achievements. On the first of November, in the year 1765, the day on which the noxious act was to go into operation, a great concourse of people assembled in the evening, proceeded to Fort George, took out the governor's carriage, and after drawing it through the principal streets, marched to the common (the present Park) where a gallows had been previously erected, on which they suspended his effigy, having in his right hand a stamped bill of lading, and in his left a figure intended for the devil. After it had hung for a considerable time, they carried it, together with the appendages and the gallows, in procession, the carriage preceding, to the gate of the fort, and thence to the Bowling-Green; where, under the very muzzles of the guns of the fort, they burnt the whole, amid the acclamations of some thousands of spectators. Ten boxes of stamps, which arrived afterward were com-

mitted to the flames, on the same spot, by the indignant populace.

In the year 1771, the present ellipsis was laid out, and enclosed with an iron railing; which, on regulating the streets, after the revolution, was elevated with its stone foundation, about eighteen inches. The railing is said to have cost eight hundred pounds, or two thousand dollars, which, in those days of simplicity and economy, was no inconsiderable sum. The original design of this enclosure was the protection of an equestrian statue of George III. made of bronze and gilt; which, four days after the Declaration of Independence, was prostrated by the boisterous patriots of those times. The pediment of Rhode Island marble, with its defaced inscription, remained on the spot until within a few years.

This beautiful area has recently been occupied by a Croton fountain. The unsightly pile of rocks attached to it, however, was deemed such a blemish that the common council ordered its removal. Whether it will be replaced by a fountain whose necessary fixtures may prove a greater embellishment, or be appropriated to some other purpose, we know not. At any rate it is highly susceptible of improvement and embellishment, and must, sooner or later, claim the attention of our corporation to that end. While the royal statue occupied its centre, it was justly considered a great ornament to that part of the city. May we not hope to see the deficiency supplied by an equestrian statue of the father and savior of his country.

In the view which accompanies this description, is included part of Broadway on the right, and the buildings before alluded to on the left. Between these is seen a small section of the battery and a bird's eye glimpse of the bay in the distance. We think it will be acknowledged a faithful delineation, and highly ornamental to the present volume.

SOMETHING FOR ALL.—So various are the appetites of animals that there is scarcely any plant which is not chosen by some and left untouched by others; and that which certain animals grow fat upon others abhor as poison. Hence no plant is absolutely poisonous, but only respectively. Thus the spurge, that is noxious to man, is wholesome nourishment to the caterpillar. That animals may not destroy themselves for want of knowing this law, each of them is guarded by such a delicacy of taste and smell that they can easily distinguish what is pernicious from what is wholesome; and when it happens that different animals live on the same plants, still one kind always leaves something for the other, as their mouths take different hold—by which means there is sufficient food for all.

BIOGRAPHICAL SKETCH OF THE

REV. SPENCER H. CONE, D. D.,

PASTOR OF THE FIRST BAPTIST CHURCH, N. Y.,
AND FIRST PRESIDENT OF THE AMERICAN
BIBLE UNION.

SPENCER HOUGHTON CONE was born in Princeton, New Jersey, April 30, 1785. At the early age of twelve years he was prepared for college, and entered the freshman class of old Nassau, where for two years he prosecuted his studies with great success. At this period, the insanity of his father obliged him to leave college, and assume the support of the family. For a short period he was the instructor in Latin in the Princeton Academy, and subsequently had charge of the school at Burlington, where among other scholars he prepared for college George Wood, who has since become celebrated as one of the most distinguished jurists in America. Mr. Cone passed from Burlington to Philadelphia upon the invitation of Dr. Abercrombie, to become his assistant in the High School, and remained with him till he was twenty-one, pursuing the study of law during the intervals of his business. The youthful days of Dr. Cone were entirely free from all vicious associations and doubtful principles. He was a young man of unquestionable standing in social life, and of invariably upright and regular character and habits. When he determined to go upon the boards, he had never spent an hour in the society of actors, nor was he at that time personally acquainted with a single individual of that profession. The details we here present to our readers may be relied upon for their literal accuracy.

At the age of twenty-one, with a liberal education, an unblemished reputation, and with a mother and her family principally dependent on him for support, as before remarked, it became necessary for him to earn more than four or five hundred dollars per year. Judge Leib, with whom he had studied law for a year, urged him to make the law his profession. Dr. Abercrombie pressed him to study for the ministry. But a present support was needed, and young Cone turned to the stage. Dr. Abercrombie gave him a letter to Mr. Warren, the manager of the Philadelphia theatre, and afterward attended the rehearsal of "Barbarossa," Mr. Cone playing Achmet. This he did that he might give him the opinion of a friend, as to the probabilities of his success as an actor, and because he was not willing that he should resign his situation in the Philadelphia Academy until a place commanding a larger salary should be secured.

Those who knew Dr. Cone will not doubt that he succeeded. His talents and acquire-

ments, his figure and voice, his high bearing and energy, fitted him admirably for the vocation which he had chosen, and Mr. Warren gave him an engagement which produced the young actor more than one thousand dollars the first year. From this time his compensation was steadily increased. His last engagement was at the rate of thirty dollars per week, with two benefits, one in Philadelphia and another in Baltimore. He succeeded as well, and made as much money, as he anticipated. He had never loved the profession; indeed, he had never in his life seen a dozen plays performed when he went upon the stage. From the first it had been with him a mere business affair, and in 1812 he left it, to engage in pursuits more congenial to his tastes, and more in harmony with the principles in which he had been educated—first in the large printing-establishment of the "Baltimore American," and then as one of the proprietors of the "Baltimore Whig." His connexion with these papers continued from 1812 to 1814, during which time he gave his talents and energies to the then exciting matters of politics and war. Here too he served as a lieutenant in the corps of sharp-shooters, and then as captain of the Union artillery company.

Early in 1814, it pleased God "to bring him out of darkness into his marvellous light," and on the fourth day of February of that year he was baptized in the Patapsco by Rev. Lewis Richards, and became a member of the First Baptist Church in Baltimore. He made the earliest practicable arrangements for the sale of the whig paper and printing-office, and, while engaged in winding up the affairs of the firm of Cone and Norvell, taught a select school of thirty scholars. Early in 1815, he received an appointment in the treasury department at Washington, and removed to that city.

We now see Mr. Cone entering the sacred calling to which his life has from that time been devoted. In 1815, he was ordained to the work of the ministry. A young man of brilliant powers, for many years conspicuous as an actor or an editor, with the advantages of a wide acquaintance and social connexions of established respectability, he attracted immediate attention, and crowds hung upon his lips. The memory still lingers in many breasts, of the occasion when he arose in Dr. Staughton's pulpit, in Philadelphia, in the midst of an immense throng who had been called together by the announcement of his presence, and, as if conscious of the motives which ruled in their hearts, opened the service by reading, as only he *could* read, the hymn commencing

"The wondering world inquires to know,
Why I should love my Jesus so!"

In December of that year, the young Christian orator was elected chaplain of the house of representatives, and served during the session. The acquaintance with public men which he formed during his political and early ministerial life he continued to maintain, and, although he mingled not at all in political affairs, he maintained till death the democratic principles and sympathies of his early life.

In 1816, he preached to the Alexandria baptist church, and became their pastor. During the seven years following, he travelled and preached extensively in Maryland and Virginia, frequently visiting Philadelphia, New York, and other places, and finally settled with the Oliver-street church in this city in May, 1823, now more than thirty years ago.

On the 1st of July, 1841, Dr. Cone accepted the unanimous call of the First baptist church in this city, and continued as their pastor till his decease, on the 28th of August, 1855. During his long ministerial life, he occupied many of the most important offices of trust and responsibility connected with the baptist denomination. In their public bodies he was almost invariably called upon to preside, and his qualifications for such duties were universally allowed to be unsurpassed, if not unequalled. Some of the offices which he held were the following: For nine consecutive years he presided over the Baptist Triennial Convention; for thirteen years, over the American and Foreign Bible Society; from its origin, in 1850, till his death, over the American Bible Union. For many years he was chairman of the board of the American Baptist Home Mission Society, and was almost invariably chosen moderator of the association with which he was ecclesiastically connected. In these various capacities, he was always noted for unflinching integrity, impartiality, sound, practical judgment, dignity and urbanity of manner, and a graceful ease and confidence arising from long familiarity with the forms of business and skill in the management of public bodies.

How circumspectly he lived during his long ministry in this city—how eloquently he proclaimed the unsearchable riches of divine grace—how broadly he made his influence felt in the great work of evangelizing the world—we need not here record. Nor can we without impropriety narrate the charity of his private life, or dwell on what we know of the magnanimity of his intercourse with his brethren.

Dr. Cone was eminent in talent; distinguished by office; extensively influential from ability, position, and the force of providential circumstances: but that which gave weight and solidity to his character, and was most marked in all his conduct and conversation, was his invincible INTEGRITY. This trait,

fixed and developed at the earliest age, and subsequently matured, and strengthened, and beautified by grace, made him (as declared by Rev. S. H. Cox, D. D., when speaking at his funeral) "A PILLAR OF GRANITE."

We may remark, in concluding this brief sketch, that Dr. Cone was never without engagements for one week from 1799, when he left college—engagements which not only sustained himself, but aided those who were dependent upon him. Industry, energy which never tired, were always among his leading and characteristic traits. His going upon the stage surprised and grieved all his friends at the time—and he had many friends, both in the church and out of it. His mother belonged to the First baptist church, Philadelphia, then under the pastoral care of the Rev. Dr. Staughton. She was a lady of superior worth, and many yet alive remember how, for many long years, as regularly as the sabbath came, she leaned upon the arm of her son, to wait upon the ministry of her eloquent and revered pastor. Mr. Cone never gave or felt any reason for going upon the boards except the necessity of increasing his income. We do not justify the reason—neither did he—but it is proper to state the fact. And so far from its being true that his conversion was occasioned by his escape from the flames of the Richmond theatre, his first visit to that city was to fulfil an appointment to preach, and the Monumental church then stood upon the site of the edifice which had been the scene of that dreadful conflagration.

We close this account with the following justly-deserved tribute to his eminent talents and usefulness, copied from one of our mouth-lies of a date anterior to his decease:—

"Dr. Cone is a great favorite, and universally popular, with all who visit his church; and has long been celebrated and favorably known as one of the principal pillars of his persuasion throughout the United States. He has taken a great interest in the cause of FOREIGN MISSIONS, and all the philanthropic and Christian objects of the day, and has on most occasions been elected moderator of the national conventions of the baptist church. For his exertions in the cause of human progress, and for his endeavors to elevate to a happier state the poor and friendless, the ignorant and uneducated, he has won 'golden opinions,' not only from the members of his own church, but from every religious denomination. He is, in a word, one who works not for a man, but for all mankind."

"The style of Dr. Cone is marked and striking—his words are well chosen, and each one is placed in a position where it will produce the most 'telling' effect. His thoughts are always couched in beautiful language, and his sermons replete with interesting and instructive matter. In his manner there is a force and earnestness which speak, in language more potent than words, the emotions and feelings of his soul."



John Hampden's Residence.

JOHN HAMPDEN.

This illustrious patriot was born in London, in 1594, of a very ancient family. He manifested an early love of letters, and was educated at Magdalen college, Oxford, after which he studied law in the Inner Temple, London. In 1619, at the age of twenty-five, he married Elizabeth, daughter of Edmund Symeon, lord of the manor of Pyrton. He was soon after elected to parliament, and in 1636, had the boldness, alone and unsupported, to resist the authority of the king in levying ship-money—an abuse of power which had been abrogated by Magna Charta. Though he lost his cause, the spirit and courage he manifested won for him unbounded popularity. Thus proclaimed by the people's voice a patriot, he was now regarded as the leader of the popular party in the house of commons against the king. In 1637, we find him, in company with Oliver Cromwell, John Pym, and other puritans, embarked on board a ship in the Thames, about to sail for America; but a proclamation from the king compelled them to abandon the design of fleeing from the tyrannies and persecutions to which their sentiments exposed them.

In 1642, John Hampden was formally accused of high treason by the king, together with several others of the popular leaders; but the commons refused to surrender the accused, and the king, apprehensive of danger from the enraged multitude, sought safety in flight. On the breaking out of the civil war, the year following, Hampden took up arms in defence of the rights of the people. In the field he showed himself courageous, intrepid and active, but his career in glory was soon cut short by a fatal wound which he received on the field of Chalgrove, on the morning of June 18, 1643. He survived but a few days, but his dying words were worthy of his pure principles and his noble life. "O Lord," he murmured, "save my bleeding country; have these realms in thy especial keeping. Confound and level in the dust those who would rob the people of their liberty and lawful prerogatives. Let the king see his error, and turn the hearts of his wicked counsellors from the malice and wickedness of their designs. Lord Jesus, receive my soul!"

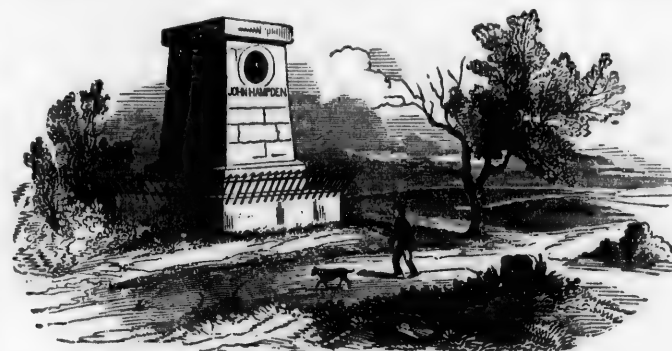
The manor-house of the patriot, in Great Hampden parish, is still standing, as is shown in our engraving. Mrs. S. C. Hall, who late-

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Hampden's Monument.

ly visited it, thus speaks of its present appearance: "It is impossible to imagine anything more still than this hallowed spot, hid away at the back of that chalky range, the Chilterns, which bound on one side the rich vale of Aylesbury. The flower-garden, through which we passed, seemed as if called into existence by the wand of the enchanter; the lingering roses, the heavy-headed dahlias, the bright-toned autumn flowers, looked so lonely in their beauty. We almost feared to speak in such deep solitude. A human foot-step, the bark of a dog, the song of a bird, the tinkle of a sheep-bell, would have been a relief—until we had drank deeply of the spirit of the place, and then, as thoughts and memories crowded around us, we felt the luxuries of the solemn quiet, and that sound here would be as sacrilege. Passing a low sort of postern entrance, we walked beneath an arch, starred over by jessamine, and stood in front of the extensive mansion, added to and enlarged by various proprietors, and at one time displaying some goodly architecture of the age of Elizabeth; the stucco, as if ashamed of its usurpation, beginning to drop away from the red brick of which the house is built. Save the 'natural decay' which must progress in all uninhabited dwellings, we saw nothing that told of the 'ruin' which comes of carelessness or neglect."

Chalgrove field, on which Hampden received his death-wound, is about twelve miles from Oxford. It is a large open plain, intersected by cross roads, as seen in our second engraving. "It was allotted in different appointments some time since," says Professor Fairholt, "and the spot where the monument is erected was appropriated to Dr. Hampden, now bishop of Hereford, a descendant of the patriot. The monument is of brick, coated

with stone. It is in an unfinished condition as far as the original design is concerned, which was, to have ornamented this pedestal with an obelisk seventeen feet high, omitted—for want of funds. As the pedestal now stands, it is about fifteen feet wide on each side. The east side has a sculptured medallion figure of Hampden, with his motto, *Vestigia nulla retrorsum*; the same motto with his arms on the west side; the south side is devoted to the names of those who subscribed to this memorial, and is dated 'June 18, 1843.' The north side has a long inscription, setting forth that 'this stone was raised in reverence to his memory,' in the 'two hundredth year' from the day on which he received his death-wound. It is a poor and paltry affair; conferring a renown by no means enviable upon the wealthy noblemen and gentlemen who erected a miserable monument and left it unfinished."

LET those who dare stigmatize the most important of all pursuits, by insinuating that there is no connexion between the cultivation of the earth and that of the mind, deny, if they can, these truths: "Matters of inquiry on subjects connected with agriculture are absolutely as boundless as the physical history of the earth which we inhabit. Every year is making new discoveries in the diversities of soil—of the elements of which it is composed—of the quantity of the different parts which enter into the composition—of the growth of plants—of what they owe to the air or to the elements of which it is formed—to the light or to its elements—to electricity, and all the agencies in vegetation by which, in the wonderful laboratory of Nature, the grain produces fruit after its kind, and the small seed becomes a great tree."

APPROBATION.

To obtain praise, distinction, or eclat, in some of their many forms, is unquestionably one of the most prevalent motives of human action, although, in the judgment of the moralist a secondary one. Undoubtedly, while the value of higher motives may be fully acknowledged, this one has not been created without a wise and good purpose. At least, we may see very clearly that it daily and hourly acts beneficially, where apparently, no higher motive would operate at all. It is, besides, one of the strongest of the social impulses, helping to make men mutually dependent, and to excite their affections toward each other. I am afraid it would be rather an unamiable world, albeit a virtuous one, where no one courted or cared for the good opinion of his neighbor.

It is necessary, however, to discriminate, by nice and rigid limits, the legitimate sphere of praise in the social scene. To be animated in all doings and sayings, all outgoings and incomings, merely by a calculation of the effect which each movement will have in securing the approbation of mortal men, would be deplorable. The conduct of any one so animated would be utter hollowness and imitation; and in the garden of his mind the hardy plants of sterling integrity and honor, to speak of nothing else, would find not one particle of congenial soil. It is even necessary to be able to act, not only without any view to the praise of men, but with the deliberate expectation of exciting their suspicion and disapprobation—for many occasions arise in life where we only can act well incurring these disadvantages. The difficulty is to know when, and how far, acting under the influence of love of approbation is allowable, and to distinguish the proper occasions when higher principle demands that that object be thrown aside. We often see individuals acting in such a way as to excite derision and blame, in matters perfectly indifferent—martyring themselves, in short, for a caprice or a chimera. Or they are so anxious to avoid the appearance of caring for the good opinion of their fellow-creatures, that they habitually, in all things, important and unimportant, take some absurd way of their own, merely because it is their own. These are follies which the considerate man holds at a distance from him. On the other hand, those who act too exclusively for praise are equally liable to both censure and ridicule. There is, in the first place, the fawning and fussy manner, the too much bowing, and smiling, and wringing of the hands, the over-eagerness to give satisfaction—all conveying the impression of a want of

manliness, natural dignity, and independence. Then there is the utter inability of such a person to face any matter of principle that is unpopular, or perhaps that has popular support only. The perfection of conduct in this respect would be to entertain a moderate wish to stand well with the world, and to act generally with a regard to its opinion, particularly in all minor matters, and where no important principle is concerned; but to be ready, when any occasion arose, to act independently of a regard to the immediate approbation of the world.

Some persons have, from nature or the conditions in which they live, so active a love of approbation that it may almost be said to amount to a torment. It will scarcely be believed, yet it is strictly true, that a man high in position and public respect was liable to be disconcerted for a day, if by chance any stranger whom he met cast what he thought a discourteous or supercilious look at him. This individual shrunk from society, for no other reason that could be observed, than that he did not in general obtain that flattering attention which was necessary to put him at ease with himself. He was mistaken by half of his fellow-townsmen for a proud and distant man, when his misfortune was only the want of a self-sustaining pride. There are professions peculiarly calculated to nourish this slavish dependence on praise and admiration, particularly those which may be called artistic, as that of the painter, the literary man, and, more than all, of the actor. Love of approbation is unquestionably a powerful prompter toward these professions, so that it may be presumed of most men who adopt them, that they begin with a stock of the feeling above the average. To this the actual dependence of their status and bread on popular applause, and their constantly acting with a view to obtain it, give an unusual degree of exercise. It is thus brought to be the master-feeling of their character. They gloat upon laudatory criticisms, and sicken at a paragraph insinuating the least censure. A hiss goes to the player's heart like a death-blow; and the poet's soul, that fiery particle, is, strange to say, "snuffed out by an article." Hence that irritability of poets which has become proverbial, but which might be extended to all kinds of men who present fine intellectual productions to the public, with a view to obtaining praise. Worst of all, the excessive keenness of each man for praise to himself is very apt to raise a jealousy as to the praises bestowed on his brethren in art. Hence the dreadful wars which sometimes take place among musicians, the quarrels of authors, and so forth. It is painful to think of the bad feelings which have been called

forth, first and last, among men of the highest intellectual attainments, through this cause. It is a cause which may be received as some apology to the rest of mankind for the horrible contentions of the ingenious; but the ingenious should also be aware that talents may be exerted for reasons superior even to a generous love of praise. The practice of the art itself—the high privilege of being able to excogitate fine thought and beautiful forms that may hap to live for ever—the sense of being able to contribute in some small degree to the improvement of mankind, or to the alleviation of the sick and weary days which many are destined to endure—may be mentioned among these reasons. Akenside has expressed the love of the artist (using this word in an extended sense) for glory, in two stanzas shot like bolts straight from the heart, on hearing a sermon against that favorite object of human wishes:—

"Come, then, tell me, sage divine,
Is it an offence to own
That our feelings e'er incline
Toward immortal glory's throne?
For with me nor pomp nor pleasure,
Bourbon's might, Braganza's treasure,
So can Fancy's dream rejoice,
To conciliate Reason's choice,
As one approving word of her delightful voice.

"If to spurn at noble praise,
Be the passport to thy heaven.
Follow thou those gloomy ways—
No such thought to me was given;
Nor, I trust, shall I deplore me,
Faring like my friends before me,
Nor a better place desire
Than Timoleon's arms require,
Or Tully's curule chair, or Milton's golden lyre!"

Here speaks the true poet. Such earnest and such natural feeling must everywhere meet sympathy. Yet if the divine only placed this said love of the "approving word" below some higher motives, we can not but acknowledge, in sober reason, that he was right.

It is almost as nice a matter to know how, when, and in what measure, to give praise, as to act upon the just medium with respect to looking for and receiving it. Some never give any praise; that is unamiable. Others give a great deal too much; that may be something as bad. The characters of both, the party who is in the way of praising, and the party who is in the way of being praised, call for consideration before we judge of either. The habit of never or rarely giving praise, even where it is due and might do good, may proceed from a coldness of nature, and will then be justly censurable; but it may be only the result of reserved and diffident habits, in which case it is to be excused; or it may be the effect of a deliberate conviction

that all praise does harm, when, of course, we must set it down as an error of judgment. The opposite extreme of too much and too frequent praise—in short, flattery, detested as the word is—is also not to be at once and conclusively condemned. When it arises from directly interested views, or aims only at playing on a weak point in the character of a fellow-creature, there is not a word to be said in arrest of judgment; but flattery sometimes proceeds from a benevolent, although it may be injudicious, wish to give pleasure; sometimes it is the genuine result of a venerative over-estimation of its object, or an exaggerated notion of the merits to which it refers. Here there may be error, but there is not ill intention; and flattery given under such circumstances is obviously a very different thing from the flattery which aims at betraying or turning into ridicule. There is also a flattery which persons of a social disposition, and who themselves love praise, give to others, in order to be on good terms with them, and obtain a good opinion and effusion of friendly sentiment in return. Here the motive is not so good, but still it is far short of the depravity of a treacherous and derisive flattery. When we are, then, the objects of flattery, or witness its being administered to others, we would require to examine and consider well the character and circumstances of the person offering it, in order to judge if the act be an offence against good morals; and if so, how far it is so. If it appear to proceed from base motives, let it be treated with open contempt; if from the wish for a return, pass it as a weakness; if from good nature or excessive veneration, excuse it for the sake of its amiable source.

But to praise or not to praise, when praise is deserved, there is the great question. It has of late been the favorite doctrine not to praise, or to praise little, as presuming that all, young and old, should be left to the approving voices of their own consciences, or the reward which good acts and performed duties are to themselves. Good-breeding also forbids all approach to direct compliment, probably because it is so apt to pass for flattery, which is so bad a thing. It is rather startling that these maxims are not consistent with much of the practice of the world. Every day we read of knighthoods and peerages given for good state service. Successful authors are treated to sheets of incense in the reviews, and to public dinners at which praises are poured on their meek heads like the oil on Aaron's beard. If a policeman show unusual cleverness in tracking out a culprit, or a revenue-cutter in capturing a smuggler, or a post-captain in seizing a slaver,

the virtue of the case is not left to be its own reward. Medals, prizes, and terms of honor, abound in our schools; and even divines are not unwilling to receive a title to certain mystic initials showing degrees of proficiency in their sacred science. When all these things are so open and palpable, when, indeed, it is so clear that most public affairs are moved by considerations of honor to individuals, it seems a strange thing, little better, I fear, than a piece of affectation, to declare against all use of praise in private life. There is always something calling for suspicion in maxims or systems which altogether condemn and put aside some great and conspicuous feature of human nature. This maxim as to praise bears strong marks of being of that character. Praise is confessedly a universal object, and has been so from the beginning of the world. Why should it be considered wrong to give that which everybody is more or less anxious to receive? There may be something in the manner, no doubt; and yet what can be grosser, in point of taste, when it is seriously reflected on, than to bring a man to a public dinner, plant him beside the chairman, open out a cascade of flattery upon him, and expect him then to rise up and task his ingenuity in at once explaining away the attributed merits, and seeming sufficiently grateful for the compliment which has been paid to him?

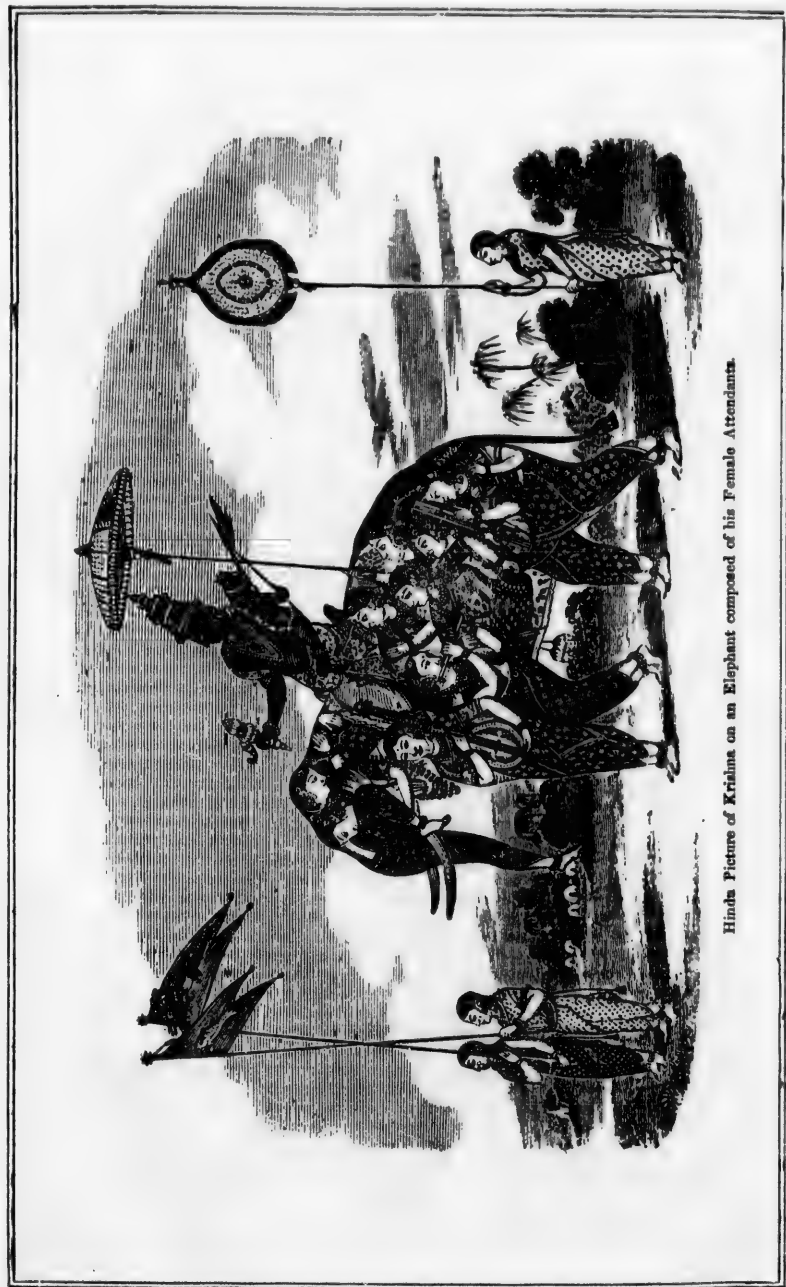
The true rationale of the question seems to be this: with the generality of natures, a moderate use of praise, as an incentive to duty and reward for its performance, appears to be quite proper. There is a vast class of acts and duties which, though good, are not to be accomplished and attended to without laborious exertion and some small degree of self-denial. To sustain and carry out one's self in these matters, one's own approving conscience is all very well; but though a good, it is a solitary and unsocial feeling. Man dearly loves to find that he is of some consequence to man. He likes to take men along with him in his own approbation. He feels in their praise the bond of a common nature press delightfully upon his heart. How, otherwise, should we see persons in independent circumstances "shun delights and live laborious days," only, perhaps, that they may produce some literary work which will have its little hour of eclat, or only a paper to be read at a meeting of twenty persons calling themselves a philosophical society? This cheap means of causing people to do what it is desirable that they should do, surely has its legitimate place in the arrangements of human society, and is capable of being used without necessarily producing harm. Perhaps there is not any one feeling of our

nature which more effectually binds us together, or figures more largely in the hourly familiar pleasures of life. It is necessary, however, to study character very carefully, in order to give due praise without doing harm, and even to know how to use it for the production of positive good. A proud person requires little or none at any time. Sufficient for him is his own self-satisfaction. There are many whom praise would easily corrupt, and to whom it should therefore be sparingly administered, even when their acts are most laudable. Others, again, whose confidence in themselves is infirm, may need the administration of an occasional word of approbation to encourage them in their duties, and even to maintain the equable flow of their spirits. There is a class of such persons, who have the ability and inclination to do all that is good, but are liable to become dispirited if they do not now and then receive an encouraging word from those about them. For such persons, an occasional compliment is an aliment as necessary as daily bread. The world would to them be totally cheerless without it. Here it would evidently be as fatal to withhold praise altogether, as in other cases it would be to give it.

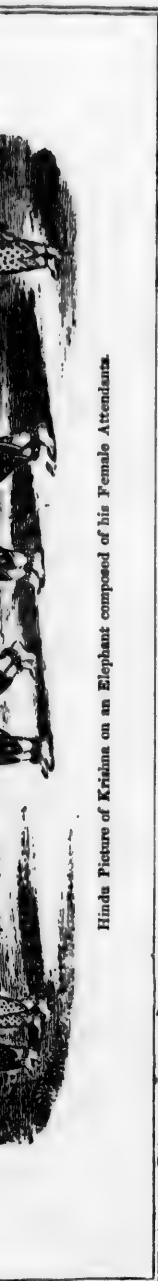
ENGLAND.—Our talented and eloquent Dr. Baird, says in one of his lectures:—"There is enormous wealth there, and resources are most unlimited for increasing it. Many suppose that England has seen her best days, but Dr. Baird could not concur in this opinion. True, there is embarrassment and distress there, but that is temporary. The nation will recover from it and still advance.

"Education in Scotland is very thorough. Her school system has been about as long in operation as that of Massachusetts, and is an excellent one. There are one thousand parishes, each of which has a good school. In England and Ireland, primary education is neglected. There is no system of common schools, and the lower classes are profoundly ignorant. As regards higher education, there are universities at Oxford, Cambridge, and London, in England, and those of Edinburgh, Glasgow, Aberdeen and St. Andrews, in Scotland. There are also King's college, London; Trinity college, Dublin; and a college at Durham, which deserve the name of universities, making in all ten. Cambridge and Oxford universities are the largest, the former having about 1,300 and the latter about 1,700 students.

"London grows rapidly. It covers an area eight miles by six. The present population is two and a half millions, and it is rapidly increasing. Edinburgh, the capital of Scotland, is the most picturesque city in Great Britain."



Hinda Picture of Krishna on an Elephant composed of his Female Attendants.



Hindu Picture of Krishna on an Elephant composed of his Female Attendants.

KRISHNA.

Our engraving is taken from a picture highly valued by the Hindoos: it is grounded on one of those idle stories which are commonly believed concerning Krishna. It is said that he was brought up by a herdsman, and that a number of damsels were his play-fellows during his infancy; of these he chose nine, who became his companions; these nine damsels would group themselves into fantastic forms; in the engraving they are seen in that of an elephant, on which the god rides. This profligate deity is the darling god of the Hindoo women; the silly and impure tales which are told and believed concerning him, tend greatly to debase the people. Let such representation be looked on by Christians with pity for the folly and indignation for the sin with which they are connected, and with earnest prayer for the deliverance of mankind from the dominion of vice and darkness.

A SKETCH OF PEKIN.

Of Pekin, the capital of the Chinese empire, and which, from the progress of events, will at no distant day be an object of considerable attention, the following sketch has been written by a late traveller. It is necessary to premise, that the situation of Pekin is near 40 degrees north, and therefore somewhat cold in winter.

During the first few days of our residence in the cold dwelling-houses of Pekin, we felt the discomforts of our European dresses very severely, and made, therefore, all haste to exchange them for Chinese habiliments. The divisions and sub-divisions which exist in a Chinese wardrobe are innumerable. Each change of season brings necessarily along with it a change of costume; and these variations, fixed by custom, are as sacredly observed by correct Chinese, as the laws of fashion by European ladies and leaders of *ton*; with only this difference, that here "the mode" has no influence, and the cut of the father's and grandfather's clothes is quite visible in those of the son and grandson—nay, it may pass even to the great-great-grandson. In the shape of caps and shoes alone, an almost yearly change takes place. Do not, however, suppose that it is any exercise of choice whether with the alteration of the season you may change your dress or not—by no means; the appointed time arrives, and an imperial edict announces that on such a day, spring-caps must be exchanged for summer ones, or summer caps for autumn ones. I therefore arrayed myself like a genuine Chinaman.

The first part of my stay was very tedious;

picture to yourself a man plunged at once into so populous a city, into the midst of a swarm of people, whose manners, customs, and mode of life, were quite strange, and whose language was utterly incomprehensible to him, and you will be able to understand my position. Was I thus alone, in the midst of this multitude of people, to pass ten of the best years of my life? Our chief drawback lay in the excessively difficult Chinese pronunciation, where one and the same sound, however simple, has its own peculiar meaning, according as it is pronounced in a high or low, in an abrupt or prolonged, tone of voice. For the first half year we scarcely made any progress whatever; at the end of two years only did we begin to find our way into the secrets of that labyrinth called the Chinese tongue, and fully four had elapsed before we were able to converse freely with the natives.

As soon as we were clothed in complete Chinese costume, being very desirous to see Pekin, we hired cabriolets and drove through the streets of the capital. First we drove to the imperial palace, where the emperor passes the winter months; during the whole of the rest of the year he resides in a palace about nine miles distant from the city. The palace occupies an immense space, consisting of a multitude of one-story houses built of bricks, each of which has its appointed use. The emperor resides in one of them, in another he conducts the affairs of state, and in a third is the empress. The others are appropriated for his children, the widowed empress, the ladies of the court, &c. Each division is surrounded by a tolerably high wall, which none may pass except those persons belonging to it. All these buildings are again surrounded with a general wall, the threshold of whose gate may only be passed by the courtiers. An enclosure surrounds this outer wall, where there are many private shops, and where everybody is allowed to walk or drive. The palaces themselves we could not see, and only the yellow roofs of glazed tiles showed themselves above the wall. Neither those streets in the vicinity of the palace, nor any throughout the city of Pekin, are paved.

Without having in the least satisfied our curiosity, we drove from the palace through the street Sy-oi-lou, which, like all the other principal streets, is distinguished for breadth and regularity. The middle of each chief street of Pekin, consists of an embankment of earth raised about three feet above the rest of the street, for the use of light carriages and foot-passengers. Heavy loads, or carriages drawn by five and seven mules, must drive along the narrow avenues on each side of the embankment, which is a good width, and would be very convenient for driving up-

on, were it not that there are tents and booths erected at each side, which confine it so much that two carriages can scarcely drive abreast. In consequence of the excessive population of Pekin, the streets are filled throughout the whole day with a double row of carriages, slowly progressing in opposite directions. It is a terrible annoyance when a foot-passenger happens to meet a friend who is driving. The latter, according to the strict etiquette of Chinese politeness, must stop, alight, and in spite of weather or dirt, say, "How do you do?" and then invite his friend to accept a seat in the carriage. Of course the pedestrian must reply to this civility, and beg his acquaintance to proceed on his way. The owner of the carriage will not, however, re-enter it until his friend on foot shall proceed; he in his turn will wait till the other resume his seat. The ceremony will often occupy half an hour; and during the whole time the carriages which follow must wait, there being no possibility of passing the one stopping up the way.

The main streets are of a good width, but the side ones are so very narrow that two carriages meeting could not possibly pass, so that the coachman must always call out on entering one to ascertain whether any other vehicle is coming in the opposite direction. Every side-street had formerly a gate wherever it crossed either another cross or a main street, and many of them still remain. These gates were formerly closed at night by warders, who lived in the vicinity, and the passenger required a particular permission in order to pass it by night; now, however, this extreme strictness has ceased; the warder merely questions the nightly passenger, and even this occurs rarely. Owing to the custom of the Chinese of surrounding themselves with high walls, the streets of Pekin are most remarkably uniform. On every side rise high enclosing walls, built of half-burnt gray bricks; everywhere peep up from behind these walls pointed sloping roofs, which in form and color are again monotonous. The imperial palace alone is covered with glazed green tiles, all the other dwelling-houses with the half-burnt gray-colored ones. Besides the emperor's, there are not more than seven or eight princely palaces. All the rest weary the gaze by their dust color; and the eye can rest on nothing which does not display the most tedious uniformity, unless it be the shops, which generally project into the streets. Before the entrance of all these booths hang black polished boards, inscribed with thick golden letters; there is not, however, any difference between them, and only those where confessions are sold are distinguished by their splendor. The whole of the front wall of these is gilt, even the roof, and adorned with dragons

and other figures. The magnificence of these shops is the most striking, as close beside them one may often find a half-destroyed wall or a little tottering dwelling-house. There are no open places or gardens in Pekin; and the only remarkable buildings are the temples, which are profusely painted with vermilion color.

It is a great mistake to accuse the Chinese of bigotry. Their temples are generally quite empty: here and there only, an official who has received a new, and, be it understood, a *profitable*, appointment, considers it his duty to visit all the temples in the city. On such an occasion he conducts himself as follows:—On entering, he takes with him a bundle of candles, made from the bark of a tree, and of perfumed wood; these he lights before the images of the gods, prostrating himself several times to the ground, during which time the priest strikes a metal saucer with a wooden mallet. Such a pilgrim having concluded his prayer, throws down some money, and proceeds into the second temple, thence into the third, and so on. Even the common people go only on particular occasions to the temple; when, for instance, a time of great drought arrives, troops of peasants assemble in the temple, in order to pray to their god for rain; and not only light candles and make prostrations, but bring also offerings with them, consisting of different sorts of bread, &c. Of a sincere disinterested prayer, offered from the heart of the suppliant, the Chinese worshipper has no conception. There are, to be sure, certain days every month when the temple is visited by the people, but then it is not with the intention of prayer but of business. Goods, such as millinery, for instance, are spread out in the courts of the temple; and the visitors promenade from noon till evening among rows of sellers, who at these fairs generally demand the most unreasonable prices. For a *nephrit*, for instance, a stone of a grass-green color, which is particularly esteemed by the Chinese, and which is used for rings, snuff-boxes, armlets, and such like, a salesman demanded two hundred and fifty lams, and he gave it to me for twenty-six! (A lam is about four florins, or a dollar and a half). Jugglers, also, display their tricks here; one will go on his hands, another throw knives; and so forth.

Toward evening the court of the temple becomes empty, and all is again silent until the following fair, with the exception of the priests going thrice a day to burn a small candle before each of the great images of the gods, and prostrating themselves each time to the earth. When the priest does not feel inclined to fulfil this heavy duty himself (and he rarely feels such a desire), he sends his

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pupil to light the candles and make prostrations; but if he does not just happen to be at hand, a common servant does it. As for the rest, the candles are lighted at the proper times, the prostrations are made as low as possible, and what more can one require? If the temples, however, are almost always empty, the houses of public entertainment, on the contrary, are filled with people from morning till night. In the best inns, one pays a high price for every trifle; so that when two or three of the rich young Chinese meet there, they easily spend in an evening fifty lams. The high price is not, however, a consequence of the extreme dearth of the articles required, but of the vanity of the consumer. In general, money is here lightly regarded; every darling son of the heaven-protected city of Pekin throws down his purse almost uncounted. They eat all manner of expensive things, such as *roasted ice*, for instance, for a little plate of which one pays six lams; it is prepared as follows:—The cook puts a small bit of ice on a sieve made of little wands or sticks, into a rather liquid batter of sugar, eggs, and spices, and then plunges it quickly into a pan of boiling swine's fat. The skill of the cook is shown by his bringing the dish upon the table before the ice has melted in the batter. A particularly good morsel can not be expected, for when put into the mouth it burns, and when bitten into it is very cold. The high price of this dish arises from so few cooks being able to make it exactly as it ought to be. Taken in general, the Chinese dishes are very disagreeable to Europeans; for they prepare everything without salt, and, in addition, float it in a superfluity of swine fat; and few dishes are made without ginger and garlic. Their roasts only are well flavored, and might receive the highest approbation from a European gastronome.

The reason of there being such an extraordinary number of eating-houses in Pekin, is the custom the Chinese have of entertaining one another, not in their own homes, but in these establishments; relations only and the most intimate acquaintances being ever invited to dinner or supper into their houses. The youth also assemble in the eating-houses, and the seniors dine there after the theatre, for the theatre and dinner at a restaurant are amusements which are inseparably connected with each other. Theatrical representations commence at eleven in the forenoon, and continue till six in the evening. In the course of the play, beautiful boys, who play the women's parts, come into the boxes of the rich members of the audience, and appoint an eating-house, where they promise to come and sup with them. During supper, these boys choose the dishes, and usually ask for

the most expensive, having previously agreed with the master of the house upon a reward for so doing. All these boys are richly and tastefully dressed, skilled in conversation, lively, and witty. Neither in the theatres, the eating-houses, nor in the temple at fair times, are women to be seen, but on the streets one meets with plenty. Women of the lower rank go on foot, but those who are at all well off drive in cabriolets. The wives and daughters of princes, on the other hand, are carried in sedans. Married as well as unmarried women appear in the street with unveiled faces, and simply arranged hair, which they adorn with beautiful artificial flowers. Even the most ragged, dirty, old cook, if she is only going to the door to buy a little garlic or cabbage, has always a flower, usually red, stuck among her gray locks. The dress of the ladies is chiefly distinguished by bright colors: that of the Mandchurin ladies consists chiefly in a long upper robe with immense sleeves. This dress quite conceals the shape; but the Chinese do not distress themselves on account of this disadvantage, as they seek for feminine slenderness in narrow shoulders and a flattened chest, on which account their women all bind a broad girdle over the bosom, which supplies the place of the European corsets. The dress of the true Chinese woman consists of red or green trousers, which are embroidered with many-colored silks—of jackets, also embroidered—with a very richly embroidered upper garment.

The Chinese women are chiefly distinguished from the Mandchurins by their feet; these do not spoil their feet by tight bandages, and wear slippers like the men, only their stockings are made of gay-colored stuffs, with foot soles not less than four inches thick. The Chinese women, on the contrary, bind their feet from five years of age with broad bandages, in such a way that four toes are bent under, and the great toe laid over them; the nails press into the flesh, causing almost always wounds, and the unfortunate females suffer during their whole lives from this barbarous custom. Not one of them can stand on the whole foot, and they all walk on their heels, on which account their walk is most unsightly, and they totter from side to side. Considerable ostentation prevails when a Chinese or Mandchurin lady goes abroad: an out-rider first appears, behind him comes a two-wheeled carriage drawn by a mule, the head and sides of which are hung with green or blue cloth, into the sides of which are set in pieces of black velvet and glass; on the right and left walk two men, holding the carriage with their hands, in order to prevent its falling over at any of the inequalities of the road, and behind the carriage comes an-

other rider. As one must step into and out of the carriage in front, the coachman has to unharness his mule every time; the men who walk outside the carriage then turn it close up to the stairs, let the shafts down on the steps, and immediately turn their backs to the equipage, for, according to Chinese etiquette, they may not look their mistress in the face. The waiting-maid, who generally sits in front, first steps out, adjusts a little footstool, and helps her lady to alight. On departing, the ceremony is repeated—that is, the lady and her maid first resume their seats, then the coachman harnesses his mule, and the cortège proceeds in its former order. The men display magnificence, when they drive abroad, by the numbers of their followers, who often amount to twenty or more. But what followers! two or three are well dressed, but the rest are ragged and mounted on lame and worn-out mules. Pride, however, never allows a Chinaman to lessen the number of his attendants, although the keeping of these idle bands must be very expensive. The stir in the streets commences at break of day—that is, in summer at four, and in winter at six o'clock. The men in office first make their appearance going to the palace with public papers, and then the small dealers with eatables. The noise and bustle are continually on the increase; by seven all the streets are crowded with innumerable masses of people; and at nine or ten at night they retire to rest. At this hour the most perfect silence reigns through the empty streets, and here and there only glimmers the dim light of the paper lanterns, which are fixed on low pillars.

HABITS OF THE BLUE JAY.

This elegant bird is peculiar in North America, and stays with us all winter. He is distinguished among the bird family as a sort of beau, dressed in a dandy suit, and very vain and loquacious withal. He makes as many ridiculous grimaces, and cuts as queer antics, and gives himself as many airs, as his namesake without feathers. He is a great mimic, and in the domestic state can be taught to articulate words, and imitate the noise of a saw and other sounds.

An individual of this species which was brought up in the family of a gentleman in North Carolina had many of the tricks of the parrot. This jay could articulate a number of words pretty distinctly.

The blue-jay seems to take great delight in imitating the sparrow-hawk. This he does so perfectly as to deceive the most practised



ears. A number of jays will join in this sport at the same time, but they frequently pay dearly for their impertinence, for the hawk, making a sweep, will pounce upon one of the foremost of his tormentors, which at once causes the impudent birds to change their notes for real cries of alarm.

The blue-jay is himself a shedder of blood as well as the hawk. He destroys the young of other birds in the absence of the old ones, and steals the eggs of his neighbors, professing all the time great friendship for all of them by warning them of the approach of any other thief or plunderer, be he hawk, fox, or man.

The jay is a most inveterate enemy of the owl. Whenever he has discovered the retreat of one of these wise philosophers, as if afraid wisdom might be infectious, he summons all the feathered tribe to his assistance, and commences a loud attack upon the grave bird. At first the owl deigns to take no further notice of his assailants than to look at them with a broad stare, as if he would say, "you are not even worthy of contempt." But the noise of the battle waxed louder and louder, and may be heard at the distance of more than half a mile. The owl is at length forced to take flight, when he is followed by the whole train of his impudent tormentors, screaming to the very top of their voices, until he is driven far from their neighborhood.

The blue-jay is eleven inches in length; his head is ornamented with a crest of light blue or purple feathers, which he can elevate or depress at pleasure; the whole upper parts are light blue or purple; a collar of black passes down each side of the neck and forms a crescent on the upper part of the breast. The under parts are white. The tail is long, and light blue, tipped with black.

CHINESE STROLLING DOCTORS.

THE comforts and elegancies of life are of easy access in China, and so are many of its plagues; among these latter may be reckoned the drugs and advice of quack doctors, who take up their stations in any convenient spot, display their wares, and harangue the populace in praise of them. A cloth is spread upon the ground, and is strewn with small jars, packets neatly folded up, and a store of pitch plasters. Here and there are also strewn, in due order, long scrolls of paper setting forth the excellency of their art, and the greatness of their success. In a very few instances a table is substituted for the earth, as a platform for exhibition, and then the seller seems to rise a step in medical consideration. The doctor usually plants himself behind his humble stall; and if gifted with speech, lectures the wondering bystanders, till, by dint of argument, and the witchery of his eloquence, those who came only to look and to laugh, are possessed with the most lively faith and credit, which they would perchance have ridiculed in moments of greater sobriety. The doctors are fully aware, however that novelty is an important element in oratorical fascination; hence they seldom stay long in one place, but travel over many provinces in fetching a compass, and appear at the same place only after a long interval. One of these, who seemed to have larger endowments of a professional kind than the average of his brethren, had ranged his varied medicaments in front of the senate-house at Macao; and was engaged in a surgical operation. A poor fellow, who had lost his sight, was seated upon a stool in an attitude of meekness and resignation, while the doctor was busied in tugging at one of his ears. He had made an incision behind the conch, or free portion, and was laboring to elicit as much blood from the wound as friction could start from its hiding-place. As soon as he was satisfied with the result of his operation, he stood face to face with the patient, and asked, with an air of impatience, whether he saw the light. To this interrogatory the blind man replied "No." On this the doctor sat down beside him, and began to describe a method which would infallibly have the desired effect; but at the close of each well-finished period, the burden "no money" (*moo taen*) fell in with a melancholy cadence. At this juncture, when many were looking for some great thing, and the blind man's case promised neither honor nor pence, the quick-sighted glance of the doctor lighted upon the *fan kwei*, who was peeping from between a group of persons not very conspicuous for their outward polish. The *fan kwei* wore a

countenance of civility, which earned from the doctor a bow and a smile of recognition. After this necessary prelude, he made a few remarks to his hearers upon the peculiarities of the *fan kwei*'s face; and then, with a smile of great complacency, went up to him and began to enter into the details of a phrenological analysis. He pointed out some of the chief marks of distinction between a Chinese and a European, especially the breadth of the forehead, the height of the cheek-bones, and the form of the chin. In a Chinese, the forehead is narrow, the cheek-bones broad and high, and the chin flat; in a European, the forehead is broad, the cheek-bones low, and the chin prominent. When he had despatched the head and the face, he descended to the muscles, and firmly grasping the stranger's arm, and then that of a native bystander, expatiated upon the difference between the elastic tension of the one, and the yielding pliancy of the other. His decision seemed to be that the European has the advantage not only in compactness of texture, but also in symmetry of form. In this he seemed to have the sympathy of his auditory; for whatever the Chinese may affect to think, they often betray their admiration of the *fan kwei*'s person. Many a time have they been seen to gaze at the stranger with silence and a kind of "awe-struck" wonder, while their eyes beamed with an interest which seemed to say, "A complexion so fair, and features so well proportioned, are things not indigenous in the middle nation." This quack doctor had travelled much, and had consequently learned many things which an inquisitive mind can not overlook in shifting from place to place amid an ever-changing assortment of companions. He had a merry countenance, and a sparkling eye, which drew attention. His elocution was clear, and his arms moved with great pliancy to give effect to whatever he uttered. But his popularity was not of long continuance; and so, after a few days, he was obliged to employ a young fellow to act the part of clown, and thus assemble a troop of gazers by drollery, when eloquence and skill had proved ineffectual.

An American in China remarks: "While passing through the Chinese market-place of Macao, I heard one of these quack rhetoricians, addressing a circle of bystanders upon the proprieties of a mode of treatment he was just going to adopt in the case of an old man who was squatted close by his side. It appeared as if, a few seconds before my arrival, a bargain had been concluded between them nearly in these terms of reciprocity:—'I will impart to you,' quoth the doctor, 'the full benefit of my professional skill, and you shall give me all the money you have got



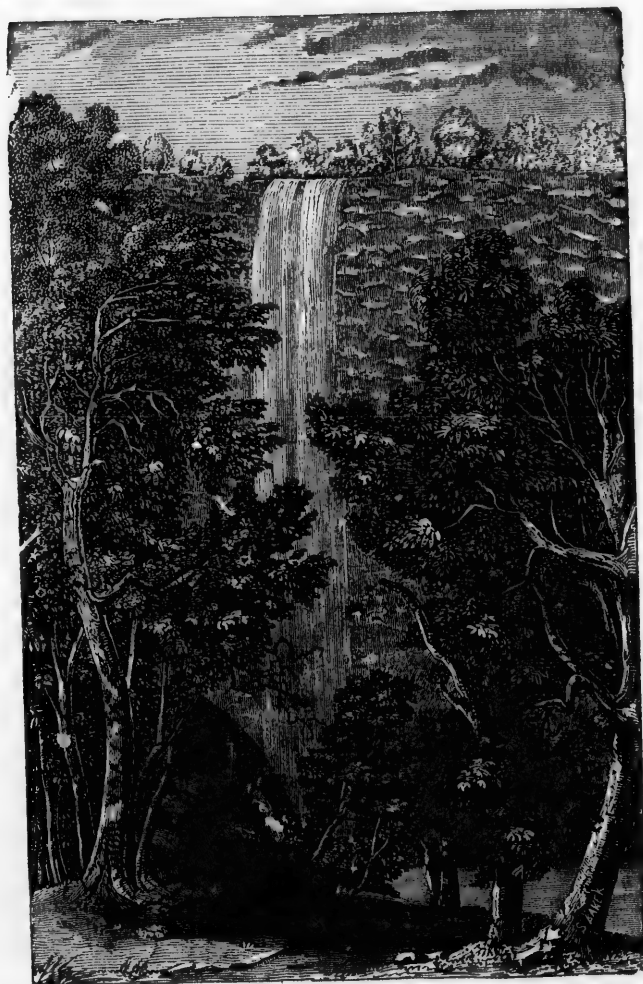
will join in this sport they frequently pay pence, for the hawk, once upon one of the ors, which at once rds to change their rm. If a shedder of blood e destroys the young ence of the old ones, neighbors, professing lship for all of them pproach of any other hawk, fox, or man. e enemy of the s discovered the re- se philosophers, as if nfections, he sum- bibe to his assistance, t upon the grave eigns to take no fur- ants than to look at, as if he would say, y of contempt." But axes louder and loud- the distance of more owl is at length forced is followed by the mpudent tormentors, up of their voices, un- their neighborhood. en inches in length; with a crest of light which he can elevate the whole upper parts e; a collar of black f the neck and forms r part of the breast. ite. The tail is long, ith black.

about you; for immediately upon the close of the harangue the old man proceeded, with cheerful haste, to empty his money-bag into the lap of the young *Æsculapius*, who, affecting to be disappointed, accused his patient of concealing some of his *tsuen* or cash, amid the folds of his garment; but as a common man in summer is very thinly clad, a shake or two of his doublet satisfied the lookers-on that all the personal effects had been fairly delivered up. The old man then retired, but soon after came back with a basir of water, and placed it at the feet of the doctor, who then took out a paper, and made him swallow a small quantity of whitish powder, without the aid of honey, treacle, or any other agreeable menstruum. The effect of this powder was supposed to be that of rendering the patient incapable of feeling any pain which might attend the operation to be performed. He then drew some needles from a paper, with an air of grave preparation, and after rubbing the aforesaid powder upon his own thigh, stuck one of the needles into it as if it had been a sort of pinchusion. The next step in the process was the selection of a few seeds from a paper parcel, putting them into his mouth, and giving the remnant to the patient, as a pledge of his generosity. While the seeds were undergoing the process of mastication by themselves, he took a pair of wooden cylinders, and, after holding a lighted roll of paper within them, clapped them upon the breast of the old man. After they had remained a few minutes upon the spot, they were removed, and left behind them two raised *areolæ*, or bumps, which the doctor, after sipping a little water, rubbed with the seeds, by this time well reduced by maceration and grinding. He next pricked the bumps with the needle which had been all the while sticking in his own flesh. To extract the blood, he applied his mouth, and drew with such violence, that the old man began to heave a sigh, and the crowd to respond by a look of anxiety. All the while he pressed his hands upon the neighborhood of the spot, as if he wished to make the blood flow in that direction. After the ceremony of washing the mouth, he applied a pitch plaster between the *areolæ*, and proceeded to treat the back after the same sort. Here was a sample of 'much ado about nothing;' when to have made one or two incisions with his knife, and then applied one of these cylinders, or cupping vessels over them, with a roll of lighted paper within it, would have caused a gush of blood,

and rendered the poor fellow a real service." "Among the persons who figure in the list of itinerant doctors, I may reckon one who dealt in antidotes against the bite of serpents. He had selected a very ingenious mode of proving the efficacy of the drug, and which did not fail to carry conviction to the mind of every one who had the happiness to view the procedure. A large hooded snake, or *cobra copella*, was treated as a kind of imp or familiar by its master, who held it in his hand, and made it rear its neck at his pleasure. When he advanced his hand or face near the venomous creature, it immediately attempted to bite, but was prevented by the dexterity of the juggler. When he had amused the crowd with the spectacle till he thought he had convinced them that the snake had the strongest disposition to bite, and therefore still retained all its mischievous propensities, he returned it into the basket, and took out a ball of some medicament, and with great fluency insisted upon its excellent use as an antidote against the assault of all poisonous reptiles. All that was necessary for the person who feared such things was to carry this ball in his pocket. To demonstrate the truth of this, he lifted the pugnacious beast from its concealment, and held the ball to its mouth, on which it started back with seeming disgust. He then rubbed the ball upon his forehead, and presented it to the snake, which threw itself back, and receded as far from him as its length would allow. A variety of simple experiments were tried, all of which went to prove that the creature had a mortal aversion to the ball. While he was busy in descanting upon its efficacy on the strength of such convincing proofs, the snake took the opportunity of biting his arm, just by way of quietly showing how much it really cared for both the doctor and his physio. But his sleeve being thick, the teeth did not penetrate the skin, and the crowd were in too great an ecstasy to use their natural eyesight; so this circumstance passed without observation from any except the fan kwei, who, though greatly delighted with the ingenuity of the fellow, was too much in the habit of scrutinizing the exhibitions of China, to let it escape his notice. The ball was priced at fifteen cash, that is, at about one cent, to place it within the reach of every class of purchasers; and the crowd pressed around the seller with so much eagerness, that his stock was sold ere I could get close enough to present my fifteen cash for one of them."

THE END.

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FALLS OF TOCOCO, GEORGIA.

VOLUME II.

AMERICAN MISCELLANY.



THE FALL OF TOCCOA.

[SEE FRONTISPICE.]



gaged stone wall, and over it

"The brook came babbling down the mountain's side."

The stream had lost much of its fulness from the recent dry weather, and as it became lashed into fury, by its sudden fall, it resembled a silver riband, hung gracefully over the face of the rock, and waving to and fro with the breath of the wind. It reminds one of the poetic descriptions of fairy-land, where we might expect the fays and elves to assemble of a moonlight night

NARROW passage leads from the roadside to the foot of the fall. Before us appeared the perpendicular face of the rock, resembling a rug-

ged stone wall, and over it to hold our festival on the green bank, where the spray, clothed with all the varied colors of the rainbow, formed a halo of glory around their heads. It is indeed beautiful, surpassingly beautiful: the tall trees reaching but half way up the mountain height, the silver cascade foaming o'er the brow of the hill, the troubled waves of the mimic sea beneath, the lulling sound of the falling water, and the call of the mountain-birds around you—each and all come with a soothing power upon the heart, which makes you anxious to linger through the long hours of the summer day.

Tearing ourselves away from the enchantment that held us below, we toiled our way up to the top of the fall, using a path that wound around the mountain. When we reached the summit we trusted ourselves to such support as a small tree, which overhangs the precipice, could give us, and looked over into the basin beneath. Then, growing bolder as our spirits rose with the excitement of the scene, we divested ourselves of our boots and stock-

ings, and waded into the stream, until we approached within a few feet of the cascade. This can be done with but little danger, as the brook keeps on the even and unruffled tenor of its way, until just as it takes its lofty plunge into the abyss below.

The height of the fall is now one hundred and eighty-six feet: formerly it was some feet higher, but a portion of the rock was detached some years ago, by the attrition of the water, and its fall has detracted from the perpendicular descent of the stream.

Toccoa forms but one of the beautiful links in the chain of mountain scenery in the northwestern part of Georgia. There may be beheld the grandeur of the lofty Youah, the magnificence and terrific splendor of Tallulah, the quiet and romantic vale of Nacooche, and the thousand brilliant landscapes that adorn and beautify the face of Nature. All these attractions will, doubtless, before another score of years has passed away, make Habersham county and its environs the summer retreat of Georgians from the low country, and help to unite in closer bands the dweller on the seashore and the inhabitant of the mountain.

UPRIGHT, DOWNRIGHT, & STRAIGHT-FORWARD.



It is very common to say of such a man that he is "upright," it is not less common to say of such another that he is "downright," or of a third that he is "straight-forward." Occasionally the same person is said to be both upright and downright, and even straight-forward, all at the same time; and we now and then hear a man called upright one day, downright another, and straight-forward on the next. It would thus seem that the words are to some extent synonymous. It will be found, however, on examination, that they have a

moral meaning as distinct and definable as their more obvious and physical significations. Popular usage, in fact, required three words to express three distinct varieties of character, and adopted these, all of good Saxon descent, to supply the want. Thus a downright man, although he may be an upright one, is not necessarily so, and *vice versa*; and the straight-forward man may possess qualities which are not inherent to, and of necessity existing in, the character of either.

The upright man acts with fairness in all his dealings. He would wrong no man of a farthing. He would not injure his neighbor by word or deed. His fame is pure before the world. His word was never broken; and his promise is as good in the market as another man's bond. He holds up his head, is not ashamed to look anybody in the face, and walking erect in the dignity of conscious honesty, is called upright accordingly.

The downright man may or may not exhibit the same moral rectitude. He may not, strictly speaking, be an upright man; but he does not thereby forfeit his title to be classed among the downright. The phrase implies not so much a moral quality, as a manner and a peculiarity. The upright man may hold his tongue; but the downright man will speak out, loudly and boldly, without fear of the consequences. He always allows his indignation to find vent. He speaks his mind; and if he combines both uprightness and downrightness, call a rogue a rogue, and a lie a lie, and cares not whom he offends by so doing. A great conqueror is, with him, a great murderer; a duellist, an assassin; a fraudulent bankrupt, a robber. He condemns in plain terms what he does not approve, and never deals in innuendoes, "or hints his doubts." Neither will he indulge in courtesies when his mind is full of bitter meanings, and call him an "honorable gentleman," whom he imagines to be the very reverse nor designate another as his "noble friend," whom in his heart he considers his very ignoble enemy. He has no patience with, or toleration for, any kind of terms which tend to gloss over error. Even where no deception is attempted, he does battle on behalf of plain speaking. When people talk of operatives, he talks

of workmen; the endearing word "wife" is not banished from his vocabulary for that of "lady;" and "man" is a word of dignity and significance with him, instead of being degraded to imply something the opposite of a gentleman. If a man who is not habitually downright were to say a tithe of the strong things that he may say with impunity, he would get knocked down for his frankness; but the very audacity of the downright man takes the world by surprise, and forces it into admiration. It forgives his insolence for the sake of the courage, and the harshness for love of the sincerity. He, moreover, has a clear head for detecting a sophism, and a knack of getting at the gist of a dispute, though it may be swathed about in redundancies and circumlocutions. He clinches an argument with homely common sense, and drives a truth into the mind of an antagonist with as much force and as little ceremony as a carpenter drives a nail into a block. He is a man, to use a very common phrase, who will "stand no nonsense"—and would rather a thousand times be thought rude, boorish, and disagreeable (which he very generally is), than call a spade other than a spade, compromise an opinion, or abandon a prejudice that he had once defended.

In every condition of life, in the very extremity of distress and poverty, a man may be upright, and will be the better for it; but to be downright is not over prudent in him who has his fortune to make, or any worldly advantages to expect from his fellows. If a man be rich, his downrightness is not much in his way. It may even become ornamental to him, and pass for caustic wit and interesting eccentricity. The worst that will be said of him is, that his ill-nature is extremely piquant and original. If he be poor, it will receive no such honorable appreciation, but be universally condemned as unjustifiable misanthropy. It is rather a dangerous weapon in any one's hands, but doubly dangerous in the grasp of those who have not high birth or station, or the right of rich revenues, to privilege them to wield it.

The straight-forward man has the candor of the downright man without his incivility. He uses clear and intelligible language on all occasions, but does not

hold himself bound to select the harshest phrases which can be found. Integrity also belongs to his character; but, being more conspicuously marked by straight-forwardness, no one thinks of speaking of his uprightness. The notable points in the straight-forward man are the directness and openness with which he acts in his intercourse with the world. He takes the broad highway, and not the crooked path. His objects may partake of the usual business character of selfishness, but he does not make them worse by attempts to disguise them. No: he says, "I am here a man of business, and pursue my interests, leaving others to do so too, as they have a right to do." Thus everybody knows at once "what he would be at;" and arrangements are made and bargains struck with half the trouble which they would cost in other hands. Sometimes this straight-forwardness is felt as a little out of taste; but all are sensible of its being extremely convenient, and generally acknowledge in the long-run that his mode of doing business is the best. It is amusing to see a circumambient man come into dealings with him. He is apt to be confounded by the very transparency of the other's mind. It puts him out. He could manage admirably with one who took cunning ways too, however much he might be upon his guard; but straight-forwardness is a new mode of fence, and he sinks under it. It is the same way with the sophist and the man who has a bad cause to defend by clever arguments: the arrow-flight directness of his common sense overthrows him at the first encounter.

Straight-forwardness is not always combined with wisdom; but when it is, it becomes a masterful power. Even by itself it can hardly fail to elevate its possessor in the esteem of mankind. As a rogue is defined to be "a fool with a circumbendibus," so may one who has no bad designs and no circumbendibus about him be said to possess a kind of wisdom. In "Don Quixote," we see straight-forwardness united with hallucinations; and it is interesting to reflect how that one good quality—the good faith, simplicity, and thorough honesty of the poor hidalgo—makes him respectable amid all his absurdities. Gen-

erally, however, the straightforward man is no fool, but one in whom all the elements are well combined, with a keen eye, a clear head, a good heart, a passionate love of truth, and an unflinching determination to pursue it.

We trust, as the world gets older, upright and straightforward men will increase among us, and downright men become more scarce. The first qualities are unquestionably virtuous; but the last is at the best an unpleasant characteristic. Downright men do not see things quite in their true light. They are oddities in our social scene. The soft words which they deprecate, and which they never will consent to use, what are they but the result of an improved civilization? In a ruder age, when bad actions were more frequent and of a grosser nature than now, it would have been cowardice and baseness in any who could see the evil to speak of it mildly. But now, when a tolerably equal standard of good conduct exists in all classes aiming at being called respectable, and when a vast tribunal instantly condemns any occasional aberration, softer terms are sufficient; and merely to express surprise at any little delinquency, conveys, in these days, a severer reproof than would have been borne two hundred years ago by a violent public declamation.

BENJAMIN WEST.

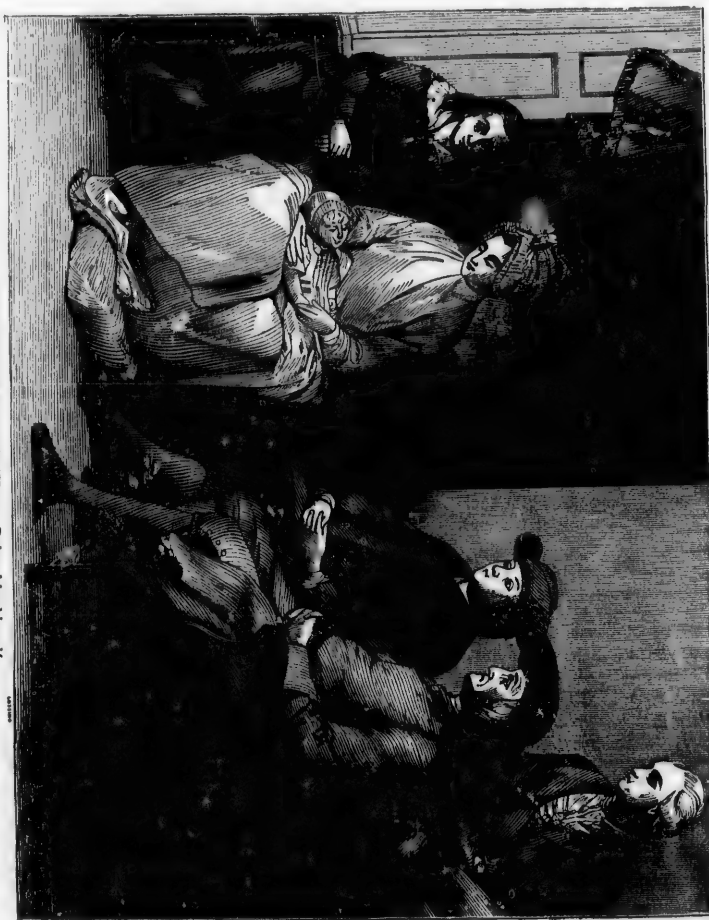


THE life of BENJAMIN WEST—the distinguished American painter—affords one of those striking illustrations of the triumphs of genius over the circumstances of birth, education, social condition, and the prejudices of custom, which are presented in such bold relief upon almost every page of human history. His birth was within the interior of our then new and sparsely-settled country, where the intercourse between the few cities of the Atlantic coast was ex-

ceedingly infrequent, and where few incentives existed, except the beauties of natural scenery, to develop and foster a taste and genius for the practice of any of the fine arts. His education was of that practical and utile kind so common and so commendable among the excellent sect (the quakers) to which his family belonged; and aside from the substantial features which it impressed upon his intellect, it was but little calculated to give wings to imagination, or encourage its flight into the apparently unreal domains of the pictorial art. The social condition of his early years afforded to him none of those stimuli to the pursuit in which he afterward became so pre-eminent, which then as now *propel* (if we may be allowed the expression) the youth of Europe forward in the path of excellence in the arts of design, surrounded as they then were and still are by all the beauties and wonders of ancient and modern art. A few badly-executed prints, such as picture-dealers are wont to display in prominent places because of their gaudy colors, to attract the vulgar eye, was the extent to which young West had been permitted to study the fine arts, when he first took up the pencil and made his initial step toward the temple of fame. And he had prejudices also of the most formidable kind to overcome: at home, the prejudices of his peculiar sect against a pursuit that seemed to foster a vain spirit, and a love for ornament, and worldly-mindedness—a pursuit that seemed to them unnecessary to the welfare of men, and hence measurably sinful. And when finally these home prejudices were overcome, and he was permitted to go abroad, the prejudices of European society were arrayed against Americans. To many, America was a *terra incognita*; and a learned cardinal, to whom young West was introduced in Rome, was astonished to find him *white*, believing all Americans were Indians! And when his superior genius had broken down these prejudices in Italy, and he had fortified himself for coming labors by a zealous study of all that he saw in Rome, Florence, and other depositories of ancient art, and he boldly wended his way to England, he was then obliged to encounter a prejudice of triple force—prejudice against his

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The Family of Benjamin West. Painted by himself.



country, his sect, and the peculiar path which he marked out for himself in the pursuit of his vocation. But his superior genius, aided by indomitable perseverance, soon conquered them all, and won for him the crown of universal esteem. Like Angelo, he was not content to follow a beaten track in the mediocre departments of his profession, where doubtless immediate pecuniary reward was far more certain; but he turned his face toward the far-off goal of supreme excellence, and grappled at once and vigorously with the difficulties and duties that beset and devolve upon the laborer in the higher departments of the arts. He turned to the volume of Holy Inspiration, and delved deep into the mines of classic lore, for his subjects; and for thirty years, under the fostering encouragement of George III., he transferred to canvass portraiture of the most remarkable events in the history of our race, with a rapidity and beauty, boldness of conception, and truthfulness of execution, never before witnessed since the days of Buonarroti. And finally, when old age dimmed his eye and palsied his hand, and he quietly and peacefully left his easel and undressed for the grave, the tears of a nation bespoke its love, and his pall was borne by nobles and academicians. Such is the triumph of genius over all that the world calls great and powerful; and by its moral force the child of poverty and even of social wretchedness is irresistibly borne forward to the high places of human grandeur. In view of this fact, let no one faint by the way. Hope on, labor on; let your motto be, "Never give up"—and the prize will assuredly be won.

So well known are all the details of the life of Benjamin West, that we deem it unnecessary to repeat them here; and we have penned the foregoing remarks chiefly for the purpose of introducing a graphic picture of the family of West, from a painting by himself.

AFFECTATION.—Affectation in any part of our carriage, is lighting up a candle to our defect, and never fails to make us be taken notice of, either as wanting sense or as wanting sincerity.

POMPEII AND HERCULANEUM.



RAILWAY carried us from Naples to Ammunicata, a small town about two miles from Pompeii.—Here we encountered a motley throng of hack-

men, who were as bland as zephyrs toward us, but would turn upon each other with the deep hoarse growl* of a tempest, which we soon lulled to repose by mounting the coach which chanced to be nearest. The instant we were seated, our charioteer cracked his whip and went off at full gallop, singing at the top of his voice one of the wild, sweet, Anacreontic airs of his country, with a spontaneity of soul which assured us that the man had never known an anxious hour or a troubled thought.† We approached the disinterred city through an avenue of tombs rising above the road on either side. On approaching the gate, the first object to be noticed is an inn, such as country people still, in all the world, know well how to use, in order to lessen the expense of a visit to the city. At each side of the gate are sentry-boxes. Passing within, we found ourselves in one of the principal streets of the city. The houses are generally but one story high; the roofs have quite disappeared, crushed beneath the weight of the volcanic ashes; but the walls stand perfectly firm. The streets are very narrow, and the pavement, composed of pieces of lava, is deeply indented by the wheels of Pompeian carriages. Many of the houses are built of lava, the fiery stream of some ancient eruption, long before the brief records of man began to note the awful voice and action of Vesuvius! Pompeii was destroyed, not by lava, but by ashes—which accounts for the admirable preservation of the objects found

* Exquisitely soft and tender as is the Italian language, its deep guttural sounds are adapted to the most ferocious invective; and it is said to abound more than any other language in disparaging epithets. I never have heard such scolding in any other language.

† This fellow may be taken as a type of the people of this country, who in the enjoyment of the present hour regard neither the past nor the future.

HERCULANEUM.

RAILWAY carried us from Naples to Annunziata, a small town about two miles from Pompeii.—Here we encountered a motley throng of hack—as zephyrs tow-upon each other owl^d of a tempest, repose by mount- nced to be near- vere seated, our ship and went off t the top of his eet, Anacreontic a spontaneity of at the man had s hour or a trou- oached the disin- avenue of tombs either side. On first object to be s country people now well how to he expense of a h side of the gate ing within, we of the principal houses are gen- ; the roofs have ned beneath the ashes; but the m. The streets pavement, com- deeply indented peian carriages. built of lava, the nt eruption, long of man began to action of Vesu- royed, not by la- accounts for the the objects found

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there. The calamity was not so sudden, but the most of the inhabitants were able to save themselves by flight: hence very few human skeletons have been found. From the absence in many of the houses of things which must have been in them at the moment of the disaster, it is supposed that the people seized on what was most precious and carried it with them; or perhaps returned after the work of ruin was done and recovered what they could by excavation. The ashy tempest which buried this fair city raged for more than a week—swept quite across the Mediterranean, and left traces of itself on the distant shores of Egypt. Naples is just the same distance from the volcanic crater as Pompeii, and by a slight variation of circumstances might have been the buried city. Pompeii was once—perhaps at the time of the fatal eruption—on the sea, and its wharves were laved by the river Sarnus. The sea has long since retired to the distance of three fourths of a mile, and the river has shrunk to a mere rivulet. After lying beneath ashes and cinders for sixteen hundred and seventy-six years, indications of its site were accidentally discovered. The excavations were begun in 1755. As yet, but one third of the city has been disinterred; but this has revealed to us objects of the deepest interest—including eighty houses, an immense number of small shops, the public baths, two theatres, two halls of justice called *basilicas*, eight temples, the prison, the amphitheatre, and other public edifices, besides a great number of fountains and tombs.

As you pass these silent and desolate streets, you are curious to learn all that is known of each house. You have your book and your map in your hand, and your guide at your side prepared to supply every deficiency by a ready memory, or by a readier invention. We are now in the street which leads from the gate, at which we entered, to the forum. On our left is a shop where drinks were sold; it has a marble counter, from which the passers-by could take their refreshment without going within. I fear they were in the habit of drinking hot punch in those days; for the circular prints of the hot glasses or other vessels are still distinctly visible on the smooth marble. On the

right stands the house of a musician—on the left, again, a house which belonged to the vestals. Then comes the custom-house, the house of a surgeon, in which were found the instruments already described. In what I might call grocers' shops, the large earthen jars which contained wine, oil, and other articles, are still arranged around the wall. They were not moveable, their contents being dipped up by ladles of which the museum at Naples contains a great many specimens. A baker's shop arrested my attention. The front portion upon the street contained the articles made ready for use. Behind this was the mill for grinding the grain, in the form of a coffee-mill—consisting of a solid cone of very hard lava, fitted to a hollow cone of the same material; still further in the rear are the ovens: so that the whole establishment is quite comprehensive.

The general plan of the houses is that of a quadrangle, built round an open court. Nearly all the rooms open into this court, at the centre of which is a marble fountain or cistern of water, and their only light is derived from the doors. From the small size of the apartments, it is supposed that hospitality could not have been one of the virtues of the Pompeians. They probably, as the inhabitants of those countries still do to a great extent, spent much of their time in the forum, in the public baths, at the theatres, or at the amphitheatre: here they saw everybody, conversed with everybody, and had therefore little motive for social entertainments at their own houses.

The baths of Pompeii are both spacious and splendid. They are divided into three separate apartments: the first for servants and for fires, the second for the use of the women, and the third for the men. All these apartments are beautifully adorned with frescoes, and with figures wrought in stucco, both on the ceilings and on the walls. The basin for cold water is twelve feet and ten inches in diameter, and is lined throughout with white marble. A bronze window-frame was found in one of these baths, containing four beautiful panes of glass, which prove that this elegant comfort was not unknown to the Pompeians. Nor is this the only evidence of their skill in this kind of manufacture: for

a large number of vases, bottles, and glasses of very elegant patterns and beautiful material, have been brought to light. Some idea of the extent and magnificence of these baths may be formed from the fact that one thousand lamps were found here. Imagine these magnificent apartments with their bronzes, their marble statues, their relieves, all radiant with the light of a thousand lamps, and thronged with a gay and graceful people, in easy flowing costume, breathing the balmy air that was ever breathed without the gates of paradise—and you have a picture of one scene in Pompeian life.

The fact that most of the inhabitants of this unfortunate city were allowed to make their escape from impending ruin, induces us to sympathize all the more tenderly with those ill-fated victims who perished. I have elsewhere alluded to the skeleton of Diomedes, found in his splendid villa without the gate; a still more touching memorial found in the same villa, is believed to be the remains of the mistress of the house and her infant child. The wet ashes had enveloped the mother with the child locked in her arms. There was found every feature and limb of both, exquisitely rounded. Even the linen which had enveloped her young and beautiful form was found adhering to the mould. But nothing of that fair form remained except the skeleton mother clasping her skeleton child—a gold chain about her neck, and gold rings on her bony fingers!

In the prison were found two skeletons with their bones still held by the shackles either of justice or tyranny! In a niche nearer the forum were found the remains of a soldier, his skeleton hand still grasping a lance!

I could not content myself with a single visit, but returned to spend a second day among these unique and deeply interesting ruins. The excavations were then going forward, and I had the pleasure of seeing the walls of a house laid bare, which had been hid from the light of day for eighteen hundred years. The frescoes on these walls were as bright as if the pencil had traced them but yesterday! The excavations are conducted by the government, and the premises are guarded night and day against depredations. Visitors are

always attended by guides authorized by the government.

To explore Herculaneum* is a more difficult enterprise. It was buried beneath solid lava, or if beneath loose ashes and mud, these materials have consolidated into a gray rock, which makes excavation a slow and costly work. Nevertheless, a magnificent theatre, two temples, a portico, and several private houses, were excavated, but all except the theatre have been filled up, and the work is not now in progress. We descended into the theatre, and wandered through its dark spacious caverns—formed by excavation, for it was as completely filled with solid rock as a mould with molten lead. Many interesting and beautiful works of art were found here. The depth of our descent was between seventy and eighty feet below the surface of the rock. The modern town of Portici is built over the buried city; and while exploring the theatre, we could hear carriages rumbling along the street over our heads.

THE BURROWING-OWL AND PRAIRIE-DOG.



ENERABLE ruins—crumbling under the influence of time and vicissitudes of season—are habitually associated with our recollections of the owl; or he is considered as the tenant of sombre forests, whose nocturnal gloom is rendered deeper and more awful by the harsh dissonance of his voice. In poetry he has long been regarded as the appropriate concomitant of darkness and horror. But we are now to make the reader acquainted with an owl to which none of these associations can belong; a bird that, so far from seeking refuge in the ruined habitations of man, fixes its residence within the earth; and instead of concealing itself in solitary recesses of the forest, delights to dwell on

* Accidentally discovered in 1796, in digging a well.

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Burrowing Owls and Prairie Dogs.

open plains, in company with animals remarkable for their social disposition, neatness, and order. Instead of sailing heavily forth in the obscurity of the evening or morning twilight, and then retreating to mope away the intervening hours, our owl enjoys the broadest glare of the noontide sun, and flying rapidly along, searches for food or pleasure during the cheerful light of day.

The burrowing-owl resides exclusively in the villages of the marmot or prairie-dog, whose excavations are so commodious as to render it unnecessary that our bird should dig for himself, as he is said to do in other parts of the world, where no burrowing animals exist. These villages are very numerous, and variable in their extent, sometimes covering only a few acres, and at others spreading over the surface of the country for miles together. They are composed of slightly-elevated mounds, having the form of a truncated cone, about two feet in width at base, and seldom rising as high as eighteen inches above the surface of the soil. The entrance is placed either at the top or on the side, and the whole mound is beaten down externally, especially at the summit, resembling a much-used footpath.

From the entrance the passage into the mound descends vertically for one or two feet, and is thence continued obliquely downward, until it terminates in an apartment, within which the industrious marmot constructs, on the approach of the cold season, the comfortable cell for his winter's sleep. This cell, which is composed of fine dry grass, is globular in form, with an opening at top capable of admitting the finger; and the whole is so firmly compacted, that it might, without injury, be rolled over the floor.

It is delightful, during fine weather, to see these lively little creatures sporting about the entrance of their burrows, which are always kept in the neatest repair, and are often inhabited by several individuals. When alarmed, they immediately take refuge in their subterranean chambers; or, if the dreaded danger be not immediately impending, they stand near the brink of the entrance, bravely barking and flourishing their tails, or else sit erect to reconnoitre the movements of the enemy.

In all the prairie-dog villages the burrowing-owl is seen moving briskly about, or else in small flocks scattered among the mounds, and at a distance it may be mistaken for the marmot itself when sitting erect. They manifest but little timidity, and allow themselves to be approached sufficiently close for shooting;—but if alarmed, some or all of them soar away and settle down again at a short distance; if further disturbed, their flight is continued until they are no longer in view, or they descend into their dwellings, whence they are difficult to dislodge.

The burrows into which these owls have been seen to descend, on the plains of the river Platte, where they are most numerous, were evidently excavated by the marmot, whence it has been inferred that they were either common, though unfriendly residents of the same habitation, or that our owl was the sole occupant of a burrow acquired by the right of conquest.

The evidence of this was clearly presented by the ruinous condition of the burrows tenanted by the owl, which were frequently caved in, and their sides channelled by the rains, while the neat and well-preserved mansion of the marmot showed the active care of a skilful and industrious owner. We have no evidence that the owl and marmot habitually resort to one burrow; yet we are assured that a common danger often drives them into the same excavation, where lizards and rattlesnakes also enter for concealment and safety. The owl digs itself a burrow two feet in depth, at the bottom of which its eggs are deposited on a bed of moss, herb-stalks, and dried roots.

The note of our bird is strikingly similar to the cry of the marmot, which sounds like *cheh, cheh*, pronounced several times in rapid succession; and were it not that the burrowing-owls of the West Indies—where no marmots exist—utter the same sound, it might be inferred that the marmot was the unintentional tutor to the young owl: this cry is only uttered as the bird begins its flight. The food of the bird we are describing appears to consist entirely of insects, as, on examination of its stomach, nothing but parts of their hard wing-cases were found.

"CROSS FOLKS."



It is not an uncommon thing to have it whispered through this or that neighborhood, that such a man is "cross in his family." No one knows just how it is exactly. Gentlemen in his address, polished in manners, constitutionally full of good feelings, and from principle benevolent, yet he is "cross." Some of his friends say he is, his servants will swear to it, something of an irritable temperament shows itself now and then elsewhere, and the man is set down "cross." We have sometimes, in moments when we had nothing else to do, speculated a little upon this matter; and we have asked ourselves whether it were not possible, if the thing were looked to, to show how it might be, that the poor man is suffering, it is not altogether unjustly, yet where there are very great palliatives for his conduct. We have said to ourselves, "What if it should appear, on examination, that the man is naturally one of the kindest and most generous men in the world; that he bore this character in boyhood, through youth, and in incipient manhood; that he had the quickest sensibility, a mind ever open to see beauty everywhere about him, and a heart to feel it—and he walks amid the beautiful things of the earth one of those who find even amid inanimate creation objects of truth and wonder, and hear lessons of purity and peace; but for the last few years of his life, subtle disease has been preying upon and undermining a naturally sturdy constitution, "playing the deuce" with that most complicated of all things, the nervous system, and through that nervous system thus preying upon that naturally most delicate mind and heart, preparing him exactly to feel most, and in a painful way, all the little annoyances of daily life. And now suppose in addition to all this, he is one still confined to business; and to make the case still more striking, suppose his occupation a daily tax on the brain, either in a profession, or, what is perhaps worse, in the uncomfort-

able elevation of a daily caterer for other men's noddles, in the shape of author or editor, and where, if the thing exists anywhere, he must *not* be disturbed by the ten thousand nettles that an all-wise Providence has scattered along the little by-paths of private life; and for whom things must be arranged *at home*, if they must for any one, in such a way as that the mind shall be kept equable and the heart undisturbed.

But now let us suppose that from some cause or other—we will not say what—there is that in his family exactly calculated to nettle and disturb this same nervous and diseased mind. Suppose him poor, and yet his expense is large; independent in feeling, but dependent by necessity; fond of order in the household, but yet has a sick companion; perfect in heart and spirit, but yet physically incapable of securing this; overwhelmed with visitors, whose tastes and habits are no more like his than chalk to Dutch cheese, or visited by poor relations, who, true to the nature of the case, must have all notice, and thank you for nothing: now suppose all this, or forty other things we might easily sum up if we had time, were by some combination to meet in the circumstances of this same individual—the very things to *make* him cross—and where is the man, woman, or child, who would not look with a little more compassion on this "cross man in his family," or perhaps judge with a little softer judgment on his weakness and deficiencies? Now let it not be supposed we apologize for sin in any shape, or for any of the little deformities of social life. All wrong is blameable. Yet is there not that, often out of the way of the world's eyes, in the conditions of men, which brings down our harsh judgments on them like thunderbolts, when they ought rather to fall in the shape of the dews of heavenly forgiveness—and which would, if we look for it, rather inspire with feelings of benevolence, yes, even love, where possibly we have only indulged in those of distrust and resentment? It will not hurt us, just to think of this: and as we are among those who are trying to think for the good as well as amusement of our readers, we have picked up these few truths passing along this

morning to our office, and we scratch them down "for the benefit of all those whom it may concern."

THE PORPOISE.



THE *cetacea* (an order of *mammalia* comprising the whale, the grampus, the porpoise, &c.) were formerly classed with *fishes*, and in common language still bear that ill-applied title.

Hence we read of the "*whale-fishery*," and of the number of "*fish*" taken upon any occasion. The *cetacea* are not "*fish*" in any sense of the word. They breathe the atmospheric air by means of lungs; their heart consists of two auricles and two ventricles; their blood is warm; they bring forth living young, and manifest toward them great attachment, nursing and protecting them with remarkable assiduity. As it respects the general form of their body and the construction of their limbs, the *cetacea* differ considerably from all terrestrial *mammalia*; and the reason is evident—their exclusive destination to aquatic habits. Terrestrial *mammalia* are covered with hair, wool, spines, scales, or plates of mail: in the *cetacea*, we find the skin naked and smooth—a circumstance in strict harmony with their structure and habits. In its general outline, the body has considerable resemblance to that of a fish, being of an oblong form, and terminating in a thick, muscular tail, furnished at the extremity with a horizontal cartilaginous paddle. There are no posterior limbs, and the anterior are modified into the form of short broad oars, which they resemble also in their use. But the great muscular force resides in the tail; its action is not, however, from side to side, as we see in the fish, but up and down, and the reason of this arrangement is very evident: the *cetacea* breathe air, and are obliged to inspire every few minutes—hence, plunging as they do into great

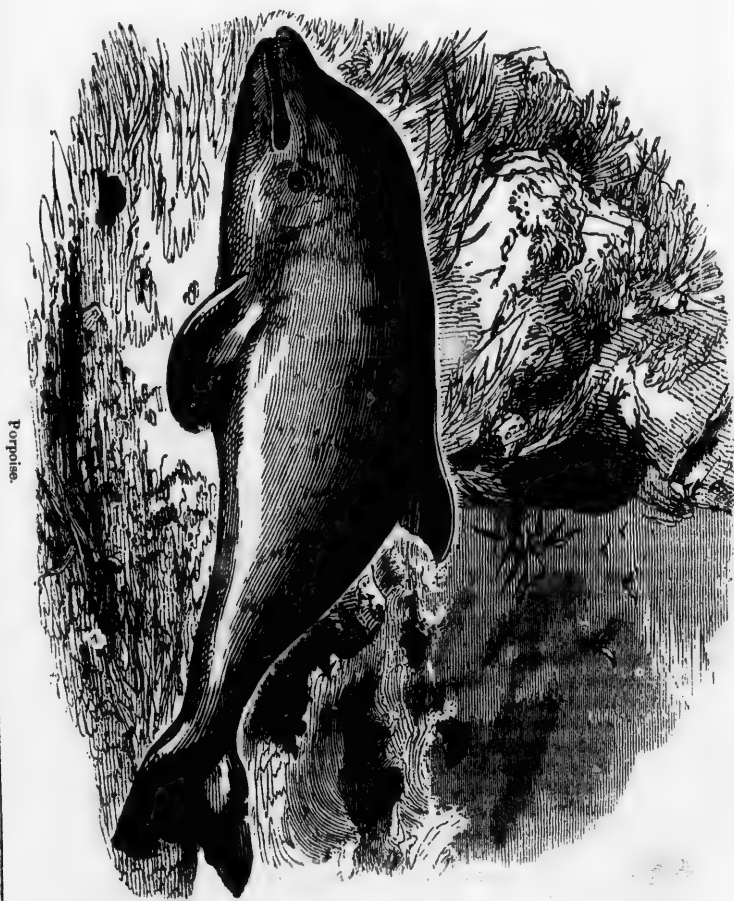
depths, they are enabled to raise themselves by a succession of vigorous strokes with great rapidity to the surface. What is termed "*blowing*" by the whale-fishers is nothing more than the forcible expiration of the breath before the animal has reached the surface. Having retained his breath as long as possible, as he ascends he begins to force out, through his nostrils, the pent-up air, which throws aloft the water in a jet or column. The position of the nostrils in the *cetacea* is well worthy of consideration. Of little use as olfactory organs, they are the exclusive apertures through which the process of breathing takes place. In other *mammalia*, the nostrils are placed at the extremity of the muzzle, but in the *cetacea* the muzzle or snout is always immersed beneath the surface, and can not well be elevated. Where, then, can these organs be conveniently situated? On that part which, as the animal floats, rises naturally above the surface. They open on the top of the head, and lead, in the whales, into a large sack, where the air, before being expired, is pent up, and whence it is violently expelled by the compression of powerful muscles. The larynx or windpipe is prolonged into the posterior *nares*, or back of the nostrils, in the form of a cone, so that the air is immediately conducted to the lungs through an uninterrupted channel. As it regards the organs of sight and hearing, we may observe that, as in fish, the eye is adapted to the density of the surrounding medium, the cornea being flat, and the crystalline lens globular. The external aperture of the ear is very small, and capable of being closed.

There are two other points, of especial interest, which we can not pass over, general as we intend our remarks to be: we allude to the deposition of a layer of oil or blubber between the skin and muscles, and to the construction of the vertebrae of the neck. There are several uses connected with the mode of life of the *cetacea* which the layer of blubber between the skin and muscles appears to serve. In the first place, it tends to render their specific gravity lighter, a circumstance of some importance when we consider the immense mass of muscle and bone of which these animals are compacted. It is, however, in the

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Porpoise

true whales that we find the layer of blubber the thickest. These are animals exposed to the rigors of the polar circle, and it would appear to be a means of preserving the vital heat of the body, which might perhaps be otherwise unable to withstand the intensity of the cold. This coating is as bad a conductor of caloric as the fur of the white bear. But the blubber has most probably another use also. It is well known that the whale plunges to an amazing depth, where it has to sustain an extraordinary pressure. Now, to prevent this pressure from paralyzing the muscles and disturbing the functions of the internal organs, must be one of the ends to be kept in view in the economy of this gigantic animal. Such a purpose the thick layer of blubber will well subserve, and such is, no doubt, one of its appointed uses.

The cetacea appear to have no neck. They have no distinct interval of separation between the head and the trunk, yet, if we examine their skeleton, we shall find that they possess the number of cervical vertebræ common to all mammalia, namely, seven. The neck of the giraffe also consists of seven vertebræ. But, in the one case, we find the vertebræ elongated to the utmost; in the other case the whole seven are compacted closely together, and so compressed as to lose the usual appearance of such bones; they scarcely occupy the space, in length, of a single vertebra of the giraffe. Hence the neck of the cetacea is immovable and solid.

The cetacea are divided into several groups. Some are herbivorous, as the dugong, feeding on the submarine vegetables which grow in shallows or near shore; most, however, are carnivorous, preying on the fish and other tenants of the ocean. To this latter family must be referred the porpoise (*Phoca communis*, CUVIER).

The porpoise is the smallest of the cetacea, seldom exceeding five feet in length. It frequents, in troops, the bays and inlets of our coast, and especially the mouths of rivers, not unfrequently advancing to a considerable distance up their stream. In such places it is often taken in nets by the fishermen, becoming entrapped while eagerly pursuing its prey. When the shoals

of herring and other fish which periodically visit our coast make their appearance, they are harassed, among other enemies, by this active and voracious animal, which revels in the luxury of a perpetual feast; and, as its appetite is enormous and its digestion rapid, the slaughter in which it appears incessantly occupied must be very great. The peculiarity of their motion results from the horizontal position of the tail paddle, and the up-and-down stroke which it gives; and their momentary appearance is for the purpose of breathing, which accomplished, they plunge down in search of their food. In former days, the flesh of the porpoise was highly esteemed as a delicacy for the table, and was served at public feasts; indeed, it is but lately that it has fallen into disrepute: the turtle usurps its place. Our forefathers must have had a different notion about table delicacies from ourselves; for few, we believe, would now relish the rank, oily, fishy flesh of this animal.

THE BOTTLE TIT AND NEST.



OW delightful it is, on a fine summer's day, when Nature, clad in her gayest robes, inspires us with a joyous and happy feeling, the reflex of the smile

which beams over her own face, to watch her manifold operations, and remark the beauty and discrimination of her proceedings! Whatever may be the object to be attained, how simply, but how effectually, does she proceed to its accomplishment! Behold the delicate downy appendage to the seed of the dandelion (*Leontodon Taraxacum*)! What a beautiful contrivance for their transportation, and how effectually it provides for the object in view, the propagation of the species in a distinct locality! Trace the operations of the insects buzzing and humming around you, and you will find in each something of

fish which periodically make their appearance, among other enemies, a voracious animal, a prey of a perpetual state is enormous and slaughter in which occupied must be familiarity of their horizontal position of up-and-down stroke their momentary purpose of breathing, they plunge down in. In former days, the was highly esteemed, and was served, it is but lately disrepute: the turtle or forefathers must be about table delicacies; for few, we best the rank, oily, animal.

THE NEST.

HOW delightful it is, on a fine summer's day, when Nature, clad in her gayest robes, inspires us with a joyous and happy feeling, the reflex of the smile on our own face, to watch her operations, and remark the progress of her proceedings, to be the object to be observed, how effectually, the accomplishment! the downy appendage to the nest (Leontodon Tataricum) beautiful contrivance, and how effectually the object in view, the operations of the insect in a distinct manner, the humming around you, each something of



Male and Female Bottle Tit (*Parus caudatus*, Hay) and Nest.

interest, something to be admired. Whether we regard the means by which they obtain their food, the structure of their habitations, the peculiar formations of the different species, their habits, or their powers, we shall find in each that perfect adaptation of means to an end with which all the operations of nature are carried on.

But if we find ourselves so much interested in our researches into the structure of plants, and the proceedings of the inferior animals, how much more are our feelings excited when we see the feathered inhabitants of the air sporting in the beams of the summer sun, their plumage sparkling, and the whole atmosphere filled with their song! We have no reason to doubt that all animals are formed for enjoyment and are happy in their relative situations, but none appear to us so truly joyous, so overflowing with happiness, as the aerial songsters who enliven our country walks and rural villages from morn until night. How gayly does the swallow glide over the waters of the river—now glancing against the rippling stream, and then darting off on a different tack so swiftly as to serve the poet with one of his most approved similes of velocity. From the first dawning of the day, when the lark rises into the firmament, and strains his throat with his clear song, which we hear even when the eye can no longer discern the songster, to the close of evening, we continually hear some one or other of the sweet-voiced warblers; and even at night the poet's own bird, the nightingale, continually cheers the gloom. Indeed, the appearance of the air, full of birds, has inspired many a poet with some beautiful allusion to their habits and pursuits; and our country walks have ever appeared to us to afford their chief pleasure from the universal gayety which the songs of birds from all sides appear to confer on everything around. And we have derived no little amusement and instruction from our researches into the habits and proceedings of the feathered creation. No part of the economy of nature is so full of the curious results of instinct, almost approaching to reason, which is exhibited in the structure of the habitation provided by birds for their shelter and the preservation

of their young. We have been particularly pleased with the delicate structure and peculiar form of the nest of that pretty little bird the "Bottle Tit," or "Long-tailed Titmouse" (*Parus caudatus*); and as we have an opportunity of presenting to our readers an accurate drawing, from a specimen, of the nest of this bird, we shall proceed to a description of it. It is known by other local names, as "Jack-in-a-bottle," "Bottle Tom," &c.

This elegant little animal is about five inches and a half in length. The bill is very short, the head round, and covered with rough erect feathers; it has a very long tail, whence its specific name. It is of a brownish color, with black feathers in the tail edged with white. It is most commonly found in low moist situations that are covered with underwood and interspersed with lofty oaks or elms. Its nest is generally placed in the forked branch of a large tree overhanging the water, and it lays from twelve to eighteen white eggs, spotted with rust color at the larger end, which are smaller than those of any other British bird, with the exception of the golden-crested wren.

This bird is almost incessantly in motion, running up and down the branches of trees in search of food, which consists of the smaller species of insects, also the larvæ and eggs of those that deposite them in the crevices of the bark. In the winter they associate in small flocks of from eight to twelve, and sometimes more, and are kept together by their continual chirping.

Like the nest, their colors assimilate so nearly with the white moss, abundant on trees at that season of the year, that, were it not for their note, it would be difficult to find them. Owing to the length of tail, its flight is undulating and irregular, but most usually very quick, seeming to pass through the air like an arrow. Jesse remarks that the bill becomes harder in the winter than in the summer, as it is then more worn in the act of obtaining food from the frozen ground and hard wood. The sight of this bird is remarkably acute. It flits with the greatest quickness among the branches of trees, and its food consists in a great measure of small insects only to be discerned with a microscope.

ADVANTAGE OF A BOOK.



IF all the amusements which can possibly be imagined for a hard-working man, after his daily toil, or in its intervals, there is nothing like reading an entertaining book—supposing him to have a book to read. It calls for no bodily exertion, of which he has had enough, or too much. It relieves his home of its dullness and sameness, which, in nine cases out of ten, is what drives him out to the ale-house, to his own ruin and to his family's. It transports him into a livelier and gayer and more diversified and interesting scene, and while he enjoys himself there he may forget the evils of the present moment fully as much as if he were ever so drunk, with the great advantage of finding himself the next day with the money in his pocket, or at least laid out in real necessities and comforts for himself and his family, and without a headache. Nay, it accompanies him to his next day's work, and if the book he has been reading be anything above the very idlest and lightest, gives him something to think of besides the mere mechanical drudgery of his every-day occupation—something that he can enjoy while absent, and look forward with pleasure to return to. But supposing him to have been fortunate in the choice of his book, and to have alighted upon one really good and of a good class, what a source of domestic enjoyment is laid open! what a bond of family union! He may read it aloud, or make his wife read it, or his eldest boy or girl, or pass it round from hand to hand. All have the benefit of it; all contribute to the gratification of the rest, and a feeling of common interest and pleasure is excited. Nothing unites people like companionship in intellectual enjoyment. It furnishes to each the master-key by which he may avail himself of his privilege as an intellectual being, to—

"Enter the sacred temple of his breast,
And gaze and wander there a ravished guest—
Wander through all the glories of the mind,
Gaze upon all the treasure he shall find."

And while thus leading him to look within his own bosom for the ultimate sources of his happiness, warns him at the same time to be cautious how he defiles and desecrates that inward and most glorious of temples.

OBERHASLI.



THE valley of Oberhasli is nearly in the centre of Switzerland—in the canton of Berne, and adjoining the cantons of Unterwalden and Uri; from its eastern extremity to the lake of Brienz it is about thirty miles in length, bounded on each side by lofty mountains. The valley terminates in a plain of some extent, at the end where the lake is situated. The Jungfrau, the Aarhorn, and Mount St. Gothard, are not many miles distant. The valley is watered by the Aar, which is formed by two streams that have their source not more than a mile from the sources of the Rhone. The Aar traverses a great part of Switzerland, passing through the valley of Oberhasli, into the lakes of Brienz and Thun, where it becomes navigable. Numerous cataracts pour down the sides of the valley and swell the volume of the Aar. One of them, formed by the Reichenbach, a considerable stream, falls down steep declivities in which it has perforated singular channels for its course. A black sediment is deposited by some of these mountain-torrents, which is used as manure. The natural beauties of this portion of Switzerland attract many visitors, whose disbursements form a source of considerable advantage to the inhabitants. M. Simond speaks with great admiration of the rich and smiling landscapes to be met with in the vale of Hasli. He adds that it is highly cultivated, full of villages and scattered dwellings half hid in trees. It is sheltered from the north winds; and several descriptions of shrubs and fruit-trees, which do not grow in some other parts of Switzerland, are here flourishing



Pass of Oberthal.

and productive. About fourteen thousand head of cattle are supported in the meadows and Alpine pastures. The exports consist of cattle, cheese, and skins of the chamois and other animals, which are exchanged for corn, wine, salt, manufactured goods, and colonial produce.

Oberhasli forms a bailliage, under the jurisdiction of an officer chosen from among the inhabitants and appointed by the authorities of Berne; the population amounts to about six thousand, and the valley is subdivided into three parishes. The chief town of the valley is Meyringen, which contains six hundred inhabitants.

The inhabitants of Oberhasli are considered to be good specimens of a fine peasantry. They are remarkable for their superior language and manners, their open countenances, their strength, activity, and manly proportions, which are calculated to impress travellers in their favor, though it may be observed that in these respects they have been made the subject of somewhat exaggerated statements. The personal appearance of the women is good, and their natural attractions are increased by a simple and elegant costume. Instances of great longevity are frequent, and may be attributed to the sobriety of habits generally prevalent, as well as to the purity of the air. Gymnastic exercises take place twice in the summer, to which those who reside in the neighboring valleys are invited. According to an old tradition, the inhabitants are the descendants of a colony of Swedes, who established themselves in the valley about the fifth century. The probability of this fact is strongly corroborated by the familiar use of several terms evidently of Swedish origin. The castle of Hasli, which stands on an eminence near Meyringen, is said to have formerly been the residence of one of the first Swedish inhabitants. Before the French revolution, many privileges were enjoyed by the population, for which they were indebted to their voluntary union with the Bernese, in 1334.

The eastern extremity of the valley is divided in two, and in each branch there is a stream, which flows into the Aar. One of these subdivisions of the larger valley affords the only practicable route from the Oberland to Italy by the Grimsel.

This is the pass of Oberhasli represented in the cut. M. Simond mentions a curious fact connected with the Grimsel, in one of the caverns of which a prodigious quantity of the largest crystals ever known was discovered in 1720. He states that some of these crystals weighed from four hundred pounds to eight hundred pounds. The value of the whole was estimated at thirty thousand florins (about twelve thousand dollars). The largest of these crystals, measuring three and a half feet by two and a quarter feet, is in the Cabinet of Natural History in the Garden of Plants at Paris.

One account of the valley of Oberhasli, which we have consulted, states that the population has doubled in the last hundred years, but this increase does not appear to have been attended with any change in the modes of existence, or extension of previous resources; and the consequence has been, that a portion of the population has been driven elsewhere to seek a livelihood, and the armies and workshops of Europe have thus been recruited. The cause of the constant emigration from Switzerland may be explained in the following manner: It is the nature of pasturage to produce food for a much greater number of people than it can employ. In countries strictly pastoral, therefore, many persons will be idle, or at most be very inadequately occupied. When a father has more than one son, those who are not wanted on the farm are powerfully tempted to enroll themselves as soldiers, or to emigrate in some other way, as the only chance of enabling them to marry. The following additional remarks serve still further to elucidate the social condition of the population in those parts of Switzerland which are exclusively pastoral or agricultural: There are no grounds less susceptible of improvement than mountainous pastures. They must necessarily be left chiefly to nature; and when they have been adequately stocked with cattle, little more can be done. The great difficulty in Switzerland, as in Norway, is to procure a sufficient quantity of fodder for the winter support of the cattle which have been fed on the mountains in the summer. For this purpose grass is collected with the greatest care. In places inaccessible to cattle,



Pass of Oberhasli

the peasant sometimes makes hay with crampons on his feet; in some places grass not three inches high is cut three times a year; and in the valleys the fields are seen shaven as close as a bowling-green, and all the inequalities are clipped as with a pair of scissors. In Switzerland the art of mowing seems to be carried to its highest pitch of perfection. As, however, the improvement of the lands in the valleys must depend principally upon the manure arising from the stock, it is evident that the quantity of hay, and the number of cattle will be mutually limited by each other; and as the population will of course be limited by the produce of the stock, it does not seem possible to increase it beyond a certain point, and that at no great distance.

The extension of manufactures in Switzerland during the war encouraged an increase of the population, and manufactured goods being exchanged for corn, the arable lands were, to a great extent, laid down in grass. On the return of peace, each country endeavored, by prohibitions, to sustain the prosperity of its own manufactures. The result, though unfavorable to all, has not been so each in an equal degree. The landlords, no longer having so free a market for their produce, have suffered in some cases; in others, manufacturers have been confined to the home-market, and the means of employment being diminished, the land has been burdened with the support of a part of the manufacturing population. This state of things has been severely felt in Switzerland, which stands in need of importations of corn, while the prohibitory system restrains the exportation of manufactures in exchange, and thus injures both the agricultural and manufacturing interests. Many of the Swiss peasantry have emigrated with their families to the United States. They usually embark at Havre; but if they proceeded down the Rhine to Rotterdam by the steamboats, the expense and fatigue of so long an inland journey would be much diminished; though, at the same time, the chance of obtaining an early passage across the Atlantic would not be so great as at Havre.

The inhabitants of the mountainous regions, in every part of Europe, are neces-

sarily frequently impelled to emigrate, if not to other countries, at least to other districts, and if not to settle there, at least to seek for employment at particular seasons. In the north of Derbyshire, England, for instance, where the crops are late in ripening, great numbers participate in the labors of the harvest in the adjoining counties, where it takes place earlier; and by this means they are enabled to avoid that inequality of condition to which the nature of the soil at home would condemn them if dependent upon it alone.

STAR-WORSHIP.



WE do not at all wonder at the idolatry of the ancient heathen. The rude and simple people, whose dwellings were nightly reared upon the breezy hillside, the dewy plain, or in the se-

questered shade of some palmy vale, with minds untaught, and ignorant of that knowledge which was ushered in with the soft swelling anthems of seraphic harmony—is it a wonder that they burned incense unto the queen of heaven, and worshipped the shining hosts that nightly gemmed the mysterious and everlasting blue?

Who that has gazed in the still hour of midnight upon the burnished scenery of the mighty concave above us, and thrilled with the glorious influences of the hour, can wonder at the reverent devotion of those who were unable to look beyond the bright page of creation, to the great Architect who veils his glory with such transcendent splendors?

From childhood our spirit leaped upward as if it would sunder its prison-bars, whenever we gazed on the magnificent banners that float with all their gorgeous blazonry over the dim and shrouded earth. When the sunset faded from the sky, and the last mellow tints were merged in the gathering darkness, with what ecstasy have we watched for the angel sentinels to come forth from their mystic hiding-

places, and fill their diamond lamps with splendors that night had no power to shade! If the soul were joyous in the glad sunlight, and sent forth its answering song to the hymns that made vocal each shadowy dell and echoing thicket—how it soared on the solemn wing of silent thought up to the temple of the Eternal Presence, when night spread out her starry banners, on whose magnificent folds gleamed the insignia of Omnipotence!

Last night the illness of a child called us from sleep, and as we gazed for a moment upon the starlit heavens, it seemed as if a glimpse of the almost-forgotten glory that used to entrance our young spirit, ere it had wrestled with the dark phantoms of care and sorrow, had returned to woo us again to the adoration of bygone days. Waking from the oblivious dews of slumber, and gazing alone upon the glorious heraldry of Omnipotence and wisdom, it seemed as if new mysteries and glories had dawned at once upon our spell-bound vision. All was still and quiet, brooded by the solemn wing of midnight; not a breeze stirred the sleeping foliage; the very brooks murmured softly on their way, as if soothed by the mystic influences of the hour: yet our soul leaped upward on the strong pinion of adoration, as if it had suddenly entered the vestibule of everlasting glory. There were the glorious and far-off stars—the same, that, like the bright eyes of seraphim, smiled on the young spirit's dawning horizon, still shining on, in their radiant and undimmed beauty, and to our enraptured ear weaving the voiceless harmonies of the eternal years.

Far along the northern sky an undefined yet perceptible radiance told that the merry dancers had illumined their festal halls; and the soft shimmering light, that contrasted so faintly with the starlit blue of the southern hemisphere, might well be emitted from the transparent brilliancy of their spirit-robos. For where is the strong philosophy that shall tell us the Indian's theory is not correct, and that the souls of the departed do not hover over the loved place of their abode, or spread their happy pinions along the star-paved galaxy? What are the mysterious influences that thrill our spirits in the dim night-hour, when fancy

spreads before us the shadowy panorama of the past? Do we not hear soft voices that were silent long ago, swelling on the murmuring gale, that whispers so sweetly along the waving thicket, or blends its music with the chiming waves, where the starbeams sleep so gloriously on its silver mirror?

The day is glorious: the hills, forests, and plains—the towering mountains that arrest the thunder-storm in its course, and the deep rolling ocean that lifts itself in boisterous mirth when the hurricane walks in fury over its seething billows—all these proclaim the greatness and majesty of Him who sits upon the circle of eternity: yet awe is mingled with reverence, while the soul acknowledges the great I AM. But when night unfurls her solemn banner over the earth's careworn millions, and the stars come forth with their shining cressets, filled with splendor from the eternal fount, the spirit mounts on triumphant wing to the high and holy realms of thought. Who shall tell us those beaming orbs, whose smiling rays traverse the unknown fields of space, are not the glorious abode of departed spirits—the resting-place of weary ones, that panted on life's arid desert?—And as the eye traverses from one to another along the arching sky, what yearnings stir the spirit to rise and trace the wisdom and glory of the Creator, in scanning the glittering cohorts that move obedient to his will through the boundless fields of ether! And if the earthly vision were unveiled, might we not see the spirit-messengers winging their shining ways from orb to orb through the azure plains? Well may we muse beneath the starry concave, and breathe our orisons to Him who hath fixed the spheres in their orbits, and traced with wisdom's unerring finger the pathway of worlds unnumbered.

The garish day may claim the soul's best energies, and toil and anxiety weigh down the spirit, but when night reveals the glories of the vast expanse above us, the soul will struggle to rise from the toils of earth, and contemplate the illimitable majesty of Him who called the mighty concourse of worlds from the caverns of darkness, and sent them forth on their shining, linked in their mystic circles, whose golden rings are fastened to the eternal throne!

CARNIVAL AT ROME.



THE Egyptian obelisk that rises dimly in the background of the picture, and whose austere antiquity contrasts poetically with the living bustle, uproar, and enjoyment of the principal scene, shows that it is a Roman carnival that the artist represents. With the exception of the obelisk, however, and some difference in the architecture of the houses, the engraving equally illustrates the carnival of Naples, or Milan, or Venice, or any other of the large Italian cities. The crowd and confusion, the masquerade characters, their action and grouping, are common to all Italian carnivals on their *good days*; and as these saturnalia are limited, at Rome, to eight days, every carnival-day there may be considered a good one. In the rest of Italy, where carnival continues from the feast of the Epiphany to the beginning of Lent, lasting five or six weeks, only the Thursdays and Sundays are observed for out-of-door displays; and these days are either not well observed at the beginning, or become languid at the close. Within doors, indeed, particularly at Naples a few years ago, carnival used to be kept up with spirit during all its long legitimate period: there being, every night, private masquerades, or masquerades at the opera-house, balls and suppers, and all kinds of feasting and mummeries in uninterrupted succession—and very hard work it was to go through them all!

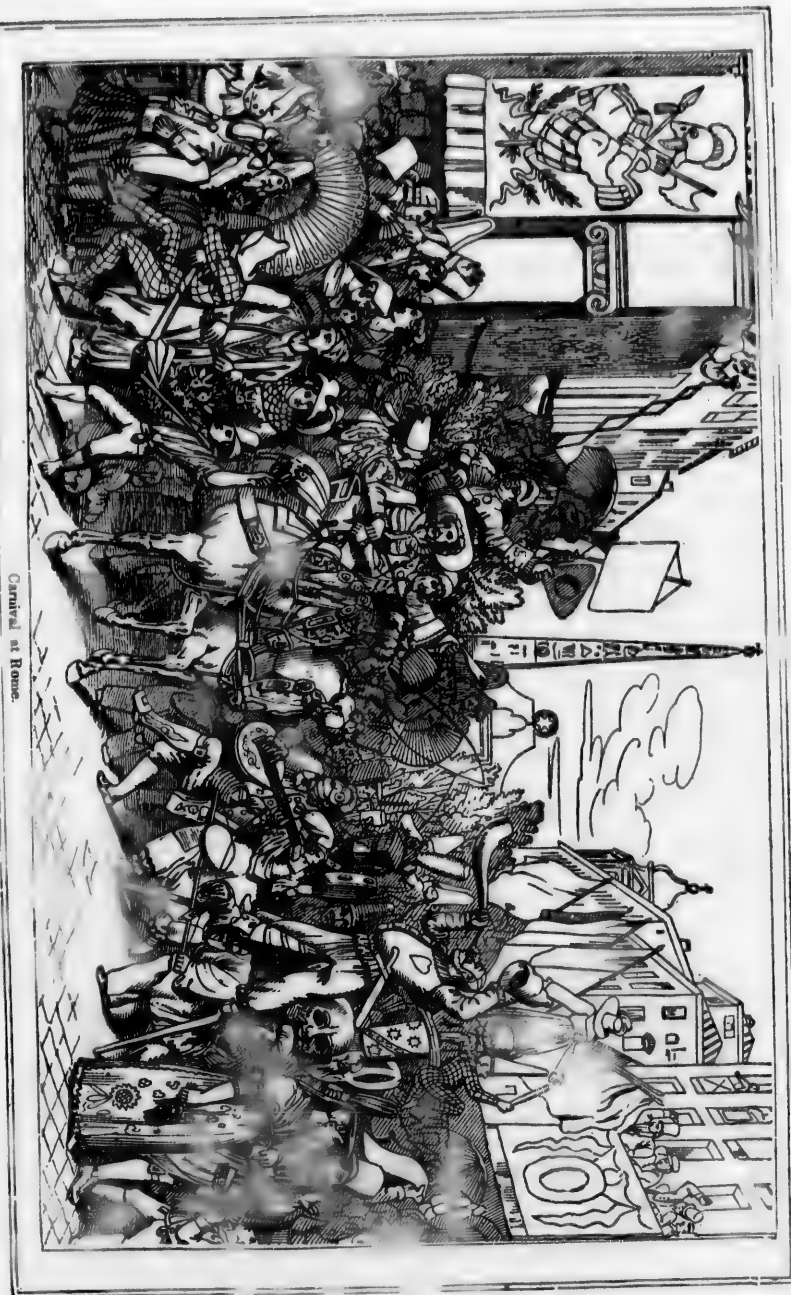
As soon as this riot of pleasure was over, the doctors, with their gold-headed canes, were seen more constantly abroad, and walking much faster than usual. They had always plenty of work on their hands, being as busy *after* it as milliners and tailors, cooks and confectioners, fiddlers, and dancing-masters, had been *during* carnival. Even in a physical sense, the abstinence and quiet of Lent were indispensable: and during that sober season, when there were no feasting and dancing, and the opera, on the nights in which it was allowed to open, closed at the sober hour of eleven, without any ballet, people had

time to recover themselves, although there annually occurred a few unlucky cases where the long revelling had sown the seeds of consumption or some other incurable disease. But this was carnival indoors. Let us return to our engraving and the streets of Rome.

In the afternoon, about three o'clock, the Corso begins gradually to fill with people—some masked, and some in their usual holiday-dresses—some on foot and some in hired carriages. About an hour later, the equipages of the nobility and gentry swell the crowd; and the open balconies and windows of every house in that long street are crammed full of company, who, for the most part, are not mere spectators, but actors in the ever-varying farce. The carriages and the horses are, for the most part, decked out in a very fine or a very capricious manner; and the anomalies represented in the print, where a coachman, dressed as a Spanish cavalier of the olden times, is driving an old Tabellone or notary, with a huge wine-flask (extended toward a punch on stilts), and a Roman doctor, with "spectacles on nose," while a small-grown punch climbs up the side steps, and a full-grown punchinello, with a squeaking trumpet to his lips, and a sturdy, turbaned Moor, with a banner in his hand, act as footmen—are such amusing contrasts as continually occur, and give the best parts of the drollery to the scene. As these carriages pass through the crowd, at a slow stately pace, those within them address or gesticulate to their friends at the balconies of the houses—or in other carriages—or in the street on foot—and generally pelt them with sugar-plums. This fire is returned by the more stationary actors: and, if you look to the left of the picture, you will see a gentleman and a lady, with uplifted hands, full of sugar-plums, taking aim; and in another balcony, to the right, two gentlemen pelting with much vigor. The greatest part of the fun, after the hodge-podge of costumes, lies in this sugar-plum warfare, or, at least with the noise of French horns and drums, cow-horns and guitars, fifes, fiducies, tambourines, and penny trumpets, and the din of thousands of voices—the masked all squeaking in a conventional carnival falsetto, and the unmasked roar-

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Carnival at Rome.

ing at the top of their lungs—no delicate passages of wit can be well heard. It is a point of gallantry, when ladies are fired at, to mix choice bon-bons and sweetmeats, wrapped up in pretty bits of paper, with nice poesies between, about "core" and "amore;" and when people do not mind the expense, they make use only of good eatable sugar-plums with the kernels of sweet almonds and caraway-seeds inside. Wherever these are most scattered there do the little boys and ragamuffins most abound; for the Italians generally have a very sweet tooth, and these poor fellows will run the most imminent risk to fill their stomachs and pockets with *confetti da signore*.^{*} In the course of their carnival operations a broken head or rib, a crushed hand or foot, sometimes occur; but, from their wonderful dexterity, casualties are not numerous. The worst of this sugar-plum fight (and a pretty general evil it is) is, that the poorer or more parsimonious of the revellers, instead of using good plums that cost money, employ villainous hard make-believes, composed of flour and plaster-of-Paris, which hurt, where they hit, almost like stones. This warfare at Rome, however, was spiritless, compared with the carnival campaigns at Naples in our time. The Neapolitans are a magnanimous people in regard to sugar-plums; and then the population is triple that of Rome, with gentry of wealth and substance. There seems to be, however, a gradual decline in the spirit of carnivals, which will probably go out altogether, and be forgotten of men.

TENACITY TO LIFE.



MEN cling to life with an unyielding grasp;—and many, whose greatest arroya^{ce} is the thought that it will one day escape them, are yet constantly inveighing against it as a thing almost intolerable. They com-

^{*} Gentlemenly sugar-plums.

plain of the path as thorny, rugged, and wearisome, but are ever tormented with the fear that they shall too soon come to its termination. It is a sweet curse, both too long and too short. The days, the months, and the years, they charge with tardiness, and wish them ended—tax invention to the utmost to manufacture wings for the lingering moments—and when they have fled, regret that they made such speed, and wish them back. The moments, when passing, move too slowly: when passed, they have gone too soon. Such is inconsistent man. He impatiently wishes to-day would give place for to-morrow, and yet every successive morrow advances him a step toward the dreaded termination, anxious to try every untried day except the last, impatient to make an acquaintance with every portion of life except its close, in hope to find each successive day more propitious than the past. He quarrels with life because it does not bless him, loves it because it has a blessing for him, and clings to it in hope to evoke that blessing, but seeks it neither with the "spirit nor with the understanding." We must understand what life is, and what it proposes to do for us, in order to make the most of it. They who cherish it for its own sake, as an end and not as a means—do not understand its nature and design. It can not satisfy the vast desires of the immortal mind. They call for more than would ten thousand times exhaust its resources. Men trifle with life by trying to elicit from it donations of enjoyment which it can not give, because it has not the means; they quarrel with it for being so destitute of benevolence as not to give them what it does not possess, and can not command. This is like complaining of a drop of water, because it is not the ocean; or censuring a molehill, because it is not the universe. The man who should mistake the portico for the parlor, and then curse it because it is neither spacious enough nor warm enough to satisfy his expectations, would justly incur ridicule. Life is but the portico of our existence, and he who mistakes it for the whole edifice deserves not to be ridiculed, but to be regarded with some graver emotion, for indeed he has made a disastrous mistake. He will find it too narrow to

satisfy the infinitely-expanding desires of the soul, and cold enough to freeze up its ardor.

Childhood looks forward with anxious expectation to youth; youth, dissatisfied, pants for manhood; disappointed manhood speeds on to old age for the prize, and despairing age looks back censoriously upon the whole course of life, and is vexed that its "wood, hay, and stubble," were not "gold, silver, and precious stones." And yet man is unwilling to part with life, because he has made it his treasure, and has no treasure beyond. But to him who regards life as merely the infancy of his existence, and uses it well, its best quality is, that it has a termination, for that termination is his introduction to a priceless treasure, which he has spent his life in accumulating. The man who has acted well his part, can hail with the liveliest emotions of joy his exit, which leads him out of a field of labor and care into a boundless field of unsullied enjoyment. It becomes mortal man, then, to be wise, to take life for what it is, to remember that it has an end, and compel every period of it to make a donation of happiness to the last hour, to seize upon every day as it passes, and say to it as did the patriarch to the wrestling angel, "I will not let thee go except thou bless me."

THE PALISADES.



HERE is probably no river in the world whose vicinage, within the same extent, presents such a combination of beauty and grandeur of natural scenery, enriched by historical associations of the greatest moment, as the HUDSON. From Manhattan island to its junction with the Mohawk, lofty mountains, gently undulating hills, cultivated fields, and beautiful villages and hamlets, alternately meet the eye as we speed along its waters in the swift steamer, all bursting in succession upon the sight like the startling scenes

of a moving panorama. And to the American—to the happy recipient of the boon of liberty—a boon fought for and won by his fathers, and bequeathed to him as a birthright—almost every spot is hallowed by the associations connected with the history of the War of Independence. Many a mountain-summit has been the pyre on which beacon-fires were lighted by the hand of disinterested patriotism; many a plain that meets our view is the place where men, strong in body and stronger in principle, bivouacked at night, and marshalled in battle array at day, ready to strike boldly for their country and their firesides.

The first objects of historical interest to be seen after leaving New York, are the ruins of Forts Lee and Washington: the former is situated just at the commencement of the Palisades, about ten miles above the city; and the latter nearly opposite, upon the eastern bank of the river. On entering the Tappan Zee, now Tappan Bay, you see upon the east the village of Tarrytown, and on the west that of Tappan: one memorable as the place where the unfortunate Andre was arrested, and the other as the spot where he was executed. We next pass Stony Point, the scene of one of the brave exploits of General Wayne; and reaching Caldwell's Landing, opposite Peekskill, romantic scenery, seldom surpassed, is developed. Every spot on shore is consecrated ground—consecrated by the congregation there of several of the master-spirits of the War of Independence. There at one time Washington, Putnam, Kosciuszko, Arnold, and other officers, met and celebrated the birthday of the dauphin of France, the unfortunate Louis who lost his crown and his life during the revolution of '94.

In this neighborhood are the ruins of Forts Montgomery and Clinton; and soon after passing the lofty promontory on the eastern shore of the river, we may see in the distance toward the northwest, on the summit of Mount Independence, the gray walls of Fort Putnam, about four hundred feet above the plain on which stands the military academy of West Point, and about three quarters of a mile distant. The plateau of West Point and its whole neighborhood is classic ground. Here, too, were



View of the Fallades, North River.

congregated the worthies of the revolution; and at this "key to the northern country" Kosciusko for some time made his residence. Here Arnold formed his plans of treason, and hence despatched Andre on his fatal journey. Here amid the mounds which mark the redoubts of Fort Clinton, arises a monument sacred to the memory of the brave Polish officer; and not far distant is another, erected by General Brown in honor of Colonel Eleazar D. Wood, who fell at the sortie of Fort Erie in 1814. We might multiply our records of the past deeds of bravery and patriotism which this classic spot brings to recollection, and point to the headquarters of Washington at Newburgh; to the crest of Beacon Hill, whereon fires were lighted during the stormy period of our war for liberty; but in so doing we should digress too far from the object of this article—a brief notice of the Palisades, a portion of which is represented in our engraving.

The Palisades are so named from their perpendicular position, and resemblance to columns forming an enclosure. They extend from a point a little north of Hoboken, New Jersey, on the western side of the river, to near Slote creek, a distance of over twenty miles; and present a wall varying in perpendicular height from two hundred to six hundred feet. They form a part of a basaltic ridge which rises at Bergen Point in New Jersey, and gradually increase in height till some of its summits reach an elevation of more than a thousand feet above tide-water. This ridge curves round Tappan Bay, leaving on the margin of the cove a limited but pleasant champagne country, which is in a high state of cultivation. The ridge varies in width from an eighth of a mile to three miles, forming a handsome region of arable table land.

The Palisades are divided into numerous vertical fissures, which give them the appearance of detached columns. In these fissures are frequently found alluvial deposits, from which vegetation shoots forth, the only relief to their bare and mason-work appearance. These basalt rocks comprehend almost every variety of formation: the *amygdaloid*, containing cellules, sometimes empty, and sometimes filled, and often presenting the warty appearance

of slag: the basaltic *brescia* or *trap-tuff*, consisting of pebbles and angular grains cemented; and the *columnar basalt* in prismatic polygons, sometimes articulated, consisting of hornblend, feldspar, and epidote, with which compact and radiated prehnite is sometimes blended.

This wall of "eternal masonry" is beautifully contrasted by the finely-cultivated country on the eastern side of the river, which rises in a gentle slope from the water's edge, and presents at a glance a rich agricultural region, adorned with tasteful mansions. Although here the superior grandeur of the Highlands is wanting, yet the pleasing combination of the majestic and beautiful renders this portion of the scenery of the Hudson river inferior to no other.

ON LONGEVITY.



It is remarkable that amid all that has been said and written on the subject of living a long time, and the rules laid down to attain it, we are as yet far from making the slightest approaches toward a *rationale* of the

real causes which are productive in this matter. Nostrums have been sold without number; and books have been written, entitled "Art of prolonging Life," &c., which would seem to indicate, at first sight, that great discoveries had been made on the subject, and the whole at length reduced to rule; but all vanishes and disappears when we come to consider the true import of the expression. It does not mean the art of prolonging the patient's life, but the doctor's—not that of the reader, but that of the author. The wondrous regimen is laid down, not for the sake of the inquirer, but for the sake of himself, who, feeling his life in danger of being shortened, from deficient culinary resources, hit upon this book as a means of prolonging it, and which he therefore very properly calls "Art of prolonging Life," &c.

But although we are ignorant of the *ra-*

tiorale in this case, as we are of all the great processes of nature, we know there are some things that must exert a powerful influence upon it—such as temperance, a pure air, regular exercise, an easy mind, to which we may add the influence of religion, and attention to whatever has to do with the inner chymistries of nature, and the laws of organized bodies. Self-denial and virtue are better than all medicines.

And yet we are met at every step with things that puzzle and perplex us. Do we speak of temperance? We are reminded of Parr, who is described as anything but a temperate man, and yet lived above a century and a half; and of Louis Cornaro, who lived a hundred years, although for half that time he had been habitually guilty of such irregular excesses, that his physicians thought it impossible he should live any longer. Do we speak of comfort and regular living? Parr, as mentioned above, and Jenkyns, who lived a hundred and seventy years save one, depended upon charity, which they had to encounter all weathers in soliciting, and which often turned out to be so precarious, that they were not able to obtain it; though this perhaps would fall in with the ideas of some French physicians, who recommend one starvation day in every week, to empty those hollow tubes, and give new impulses to those strings and strainers which Addison so beautifully takes notice of. We are not told whether the old gentlemen leaped or not; but if they had to beg all they lived on, and to fetch it in person, it might be a substitute, and thus they would fall in with the notions of other Frenchmen, who recommend leaping and active exercise before leaving a room, and thus cut short in their beginnings all such like distempers as they supposed to arise from sediment. Do we mention climate as a means of longevity? It is allowed that some climates are distinguished for an insalubrity that shortens human life, while other climates have a tendency to promote it: as while there are no nonagenarians to speak of on the coast of Sierra Leone, the inward parts of Norway are said to be so pure, that the inhabitants live till they are tired even of life. The coast of Devonshire, and the sweet vales of Montpelier, are far more congenial to the human frame

than the marshes of Missolonghi, or the si-moom, poison-swept deserts of the East. Climate, however, except in extreme and peculiar cases, has much less specific influence than we are aware. If any one thinks that in this or that particular place man must necessarily inhale the principle of long life, let him cast his eye over the following table, and note the variety of climate in which the several individuals existed, and he will see how things stand in the Old World; and by turning to this continent statistics, he will see how they stand in the New:—

NAME.	AGE.	PLACE.
Albama Marc.....	150.....	Ethiopia.
Titus Fallonia.....	150.....	Benonia.
Abraham Paiba.....	142.....	South Carolina.
Dumitir Raduly.....	140.....	Transylvania.
Countess Desmond.....	140.....	Ireland.
James Sand.....	140.....	Staffordshire.
Wife of ditto.....	120.....	ditto.
Henry Jenkyns.....	169.....	Yorkshire.
Thomas Parr.....	152.....	Shropshire.
Francis Bone.....	121.....	France.
A. Goldsmith.....	142.....	ditto.
Margaret Patten.....	138.....	Scotland.
William Ellis.....	130.....	Liverpool.
Christian Drakenberg.....	146.....	Norway.
Richard Lloyd.....	133.....	Wales.
James Hayley.....	112.....	Cheshire.
John Wilson.....	116.....	Suffolk.
Louis Cornaro.....	100.....	Venice.
Jane Reeve.....	103.....	Essex.
Marquis of Winchester.....	106.....	Hampshire.
Agnes Milbarne.....	116.....	London.

In this table, which might have been greatly extended, are included places of almost every variety of soil and climate. Venice, built literally in water; France, with its mild and genial warmth; the fierce and biting winds of Norway; and even the West Indies, proverbial for heats and moisture, being almost specific, as is thought, in cutting down the human stamina—have alike permitted longevity. Jane Reeve lived to a hundred and three, in the marshy county of Essex. Hippocrates lived to a hundred and four, in the delicious island of Cos. Albama Marc reached a hundred and fifty, in the sultry interior of Ethiopia; and Drakenberg reached to within four years of that time, on the steril mountains of Norway. Such contrasts seem to indicate that climate, except in extreme cases, and where the air is poisoned by the decay of organic matter, or such like causes, has little or no specific influence on longevity, and bid defiance to all efforts at philosophizing on the subject.

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PLACE.
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.....Benonia.
.....South Carolina.
.....Transylvania.
.....Ireland.
.....Staffordshire.
.....ditto.
.....Yorkshire.
.....Shropshire.
.....France.
.....ditto.
.....Scotland.
.....Liverpool.
.....Norway.
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If we ask old men the means by which they came to live so long, they give us such different directions in different cases, it is evident they know nothing at all about the matter. Some attribute it to their being much in the open air; some to an extreme regularity in diet and regimen; some to moderate but regular proportions of wine; some advise scarcely to drink at all, not even of that great distillery which God built originally for Adam, the produce of which he might possess without danger, and sip without sorrow: but all amounts to nothing. Some, as Cornaro, advise us to weigh our food, than which nothing can be more absurd; for if this were desirable, surely the Almighty would have blessed us with a pair of scales, or some kind of feeling within that we might know when we had swallowed four ounces—instead of which he has given us a feeling that we might know when we had swallowed enough: and this is the true time to leave off.

This, however, is certain, that every temporary shock which health receives, does something to impair the durability of the human frame; and if so, every act of intemperance, though men feel it not at present, will be found to shorten the duration of the body. And though we may be told of Parr and others, who, though often intemperate, lived to a great age, yet who can say how long they might have lived, if they had conducted themselves on a different plan? There can be no question that their occasional excesses injured them, and that materially; and Parr, it is well known, was cut off at last by intemperance: for being sent for to the king, who wished to see such a monument of antiquity, he indulged in the bounties of a palace, and then went home and died. These men lived a long while, not in consequence of their intemperance, but in spite of it, and would have lived much longer but on that account.

The means known, so far, of promoting longevity, have been usually concentrated in short, pithy sayings—as, “Keep your head cool, and your feet warm”—“work much, and eat little,” &c.: just as if the whole science of human life could be summed up and brought out in a few words, while its great principles were

kept out of sight. One of the best of these sayings is the one given by an Italian in his hundred and sixteenth year, who being asked the means of his living so long, replied with that improvisation for which his country is remarkable:—

“Con mangiar brocoli,
Portar a i pedi zoccoli,
In tetto capallo,
Pochi pensieri in cervello.”

“When hungry, of the best I eat,
And dry and warm I keep my feet;
I screen my head from sun and rain,
And let few cares perplex my brain.”

The following is about the best theory of the matter: Every man is born with a certain stock of vitality, which can not be increased, but may be husbanded. With this stock he may live *fast* or *slow*—may live *extensively* or *intensively*—may draw his little amount of life over a large space, or narrow it into a contracted one; but when this stock is exhausted, he has no more. He who lives extensively, drinks pure water, avoids all inflammatory diseases, exercises sufficiently but not too laboriously, indulges no exhausting passions, feeds on no exciting material, pursues no debilitating pleasures, avoids all laborious and protracted study, preserves an easy mind, and thus husbands his quantum of vitality—will live considerably longer than he otherwise could do, because he lives *slow*; while he, on the other hand, who lives *intensively*—who beverages on liquors and wines, exposes himself to inflammatory diseases or the causes that produce them, labors beyond his strength, visits exciting scenes and indulges exhausting passions, lives on stimulating and highly-seasoned food, is always debilitated by his pleasures, devotes himself to severe and long-continued study, is fretfully and peevishly anxious—is a very poor candidate for a long life, because he lives *fast*: as too intense a flame consumes rapidly the oil that supported it; and a fire continually blown is exhausted and goes out. In the midst of his days, he is surprised to find the living principle is expended; and a disease, manageable enough in any other case, in his case is unmanageable. He has been drawing so frequently, and such large sums, from the bank of nature, he has drawn out his whole stock, and closed his account.

Reader! it is by keeping these principles in view, and not by any little sayings and recipes for long life, that you learn the great art, if it is an art, of longevity. It is not by "keeping your head cool and your feet warm"—nor by "working much and eating little"—nor by "keeping the mouth shut and the eyes open"—nor by measuring your drink, weighing your food, adjusting your exercise, as for a race-horse, that you are to live a long life. It is by keeping these principles in view—husbanding your little stock of vitality, avoiding what excites and exhausts, not going too often to the bank, living little in much instead of much in little, living extensively, not intensively, not living fast, but living slow; and that by submitting to the principles of the gospel, you will best accomplish all these objects, and learn, moreover, *the art of living for ever.*

BLACK AND GRAY SQUIRRELS.



SQUIRRELS, as might naturally be supposed, are exceedingly numerous in many of the forests of North America, so that squirrel-hunting is one of the favorite and more refined species of sporting among such as devote a day or two to "hunting-frolics" on particular occasions; not solely for the sordid purposes of gain, but partly as a recreation from other and very different employments. Black and gray squirrels are the most commonly sought after; for, in addition to the fact of their being the most abundant, they are greatly esteemed as an article of food, and their skins are of more value than those of any of the other sorts. A party of five or six sportsmen will often kill two thousand or three thousand squirrels of various sorts in a two or three days' excursion; but your regular backwoods bear and wolf hunter rarely condescends to make war upon this species of small game. Black squirrels are far more abundant than gray ones, but why this is

the case we have never been able to arrive at any satisfactory conclusion; for in their general habits, and their partialities for those sections of the country that produce some peculiar and favorite food, there appears not the slightest difference; and since their size and strength are nearly equal, we can see no good reason for the great disparity in point of numbers. Both the black and gray squirrels are migratory and erratic in their habits; for at particular seasons of the year some sections of the forests will literally swarm with them, while at other times in the same situations but a few solitary stragglers may be seen, leaping from branch to branch in the tops of the tall forest-trees.

The foresight (or by whatever name that instinctive peculiarity common to a large portion of the brute creation may be designated) of the gray squirrel is very remarkable; for although it is more shy and timid than either the black or red ones which frequent the same localities, yet when a season of absolute famine has been approaching, it will run greater risks in committing little depredations upon the granary or corn-crib than would either of the other species. In two or three seasons, when there was an entire failure of beechnuts, chestnuts, and the other sorts of food that these provident inhabitants of the wilderness chiefly subsist upon during the long winters, we had opportunities of becoming convinced of the fact as before stated. "Until the autumn was advancing," says a writer, "I had scarcely seen a gray squirrel in the neighboring woods, but in the month of October I observed a few of them paying occasional visits to my barn and granary; and, not wishing my grain to be stolen or destroyed with impunity, I shot two or three of the earliest intruders. On those occasions I invariably found them carrying off fifteen or twenty grains of Indian corn within the cavities of their cheeks; and being provided with comparatively small cheek-pouches wherein to stow away the pilfered property, it showed to what inconvenience they would subject themselves in order to procure a little stock as the means of sustaining life through a long and rigorous winter. Whether or not the few that had first visited my premises had

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Black and Gray Squirrels

communicated the intelligence to their tribe that my barn was stored with such food as they might subsist upon during the approaching famine, of course I have no means of knowing; however, by the early part of November there were several scores of them paying their daily respects to my corn-crib and wheat-bin. A few red ones, and occasionally a black one or two, would resort to the same scene of plunder; but I found that they were more intent upon making a meal on the spot, than upon carrying away a necessary supply for the approaching winter. At this time the gray ones were so numerous, and audacious, too, that when I was not at leisure, or felt no inclination to make war upon them with my gun, I had to place a boy as a sentinel to scare them back into the woods, which he sometimes found great difficulty in effecting. In the springs succeeding those seasons of famine, I found hardly any red or black squirrels in the adjoining woods—they had evidently perished through absolute want; while a number of the gray ones which had been so fortunate as to escape my gun, and that had succeeded in laying in a winter's supply at my expense, might be seen springing from branch to branch, as agile and shy as they had been before the approach of winter; and could not help blaming myself for having denied a small and temporary pittance to so many of my graceful, sagacious, and provident neighbors.

"Although apparently not well adapted for swimming, yet both gray and black squirrels, in their migratory excursions, will venture across lakes that are one or two miles wide, as well as the largest of the American rivers. In these adventurous exploits they generally take advantage of a favorable breeze, in which case the wind acts upon their elevated tails, thereby rendering the excursion both quicker and less laborious. In the latter part of the summer I have frequently witnessed black squirrels crossing the Niagara river in considerable numbers; and I always remarked that they swam across when the morning first began to dawn. On reaching the opposite shore they would appear greatly fatigued, and if unmolested would take a long rest preparatory to their setting off for the neighboring woods."

INTERESTING FACTS IN EVAPORATION.



THE reciprocal processes of evaporation and condensation are the means whereby the whole surface of that part of the globe which constitutes land is supplied with the

fresh moisture and water necessary to sustain the organization and to maintain the functions of the animal and vegetable world. Thence sap and juice are supplied to vegetables, and fluids to animals; rivers and lakes are fed, and carry back to the ocean their waters, after supplying the uses of the living world.

The extensive surface of the ocean undergoes a never-ceasing process of evaporation, and dismisses into the atmosphere a quantity of pure water proportionate to its extent of surface and temperature of the air above it, and to the state of that air with respect to saturation. This vapor is carried with currents of air through every part of the atmosphere which surrounds the globe.

When by various meteorological causes the temperature of the air is reduced, it will frequently happen that it will come below that limit at which the suspended vapor is in a state of saturation. A deposition or condensation will therefore take place, and rain or aqueous clouds will be formed. If the condensed vapor collect in spherical drops, it will be precipitated, and fall on the surface of the earth in the form of rain; but, from some unknown cause it frequently happens that, instead of collecting in drops, the condensed vapor is formed into hollow bubbles, enclosing within them a fluid lighter, bulk for bulk, than the atmosphere. These bubbles are also found to have a repulsive influence on each other, like that of bodies similarly electrified. They float, therefore, in the atmosphere, their mutual repulsion preventing them coalescing so as to form drops. In this state, having by the laws of optics a certain degree of opacity, they become distinctly visible and form clouds.

The vapor suspended in the air during a hot summer's day is so elevated in its

FACTS IN EVAPORATION.

THE reciprocal processes of evaporation and condensation are the means whereby the whole surface of that part of the globe which constitutes land is supplied with the water necessary to sustain and to maintain the animal and vegetable life, and juice are supplied to animals; and feed, and carry back waters, after supplying the world.

The surface of the ocean undergoing process of evaporation into the atmosphere in proportion to the temperature of the water to the state of that air saturation. This vapor is carried off through every pore which surrounds

meteorological causes the air is reduced, it is then that the wind will come which the suspended water in saturation. A deposition will therefore take place, and aqueous clouds will be formed. The condensed vapor collect in the air, and will be precipitated, and fall on the earth in the form of rain, or some unknown cause, so that, instead of collecting, the condensed vapor is carried off in bubbles, enclosing the water, and lighter, bulk for bulk.

These bubbles are repulsive influence on the surface of bodies similarly coated, therefore, in the mutual repulsion preventing so as to form clouds, having by the laws of nature, the degree of opacity, they are visible and form clouds. The water in the air during evaporation is so elevated in its

CATHEDRAL OF FLORENCE.

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temperature as to be below the point of saturation, and therefore, though the actual quantity suspended be very considerable, yet, while the air is capable of sustaining more, no condensation can take place; but in the evening, after the sun has departed, the source of heat being withdrawn, the temperature of the air undergoes a great depression, and the quantity of vapor suspended in the atmosphere, now at a low temperature, first attains and subsequently passes the point of saturation.

A deposition of moisture then takes place by the condensation of the redundant vapor of the atmosphere, and the small particles of moisture which fall on the surface, coalescing by their natural cohesion, form clear, pellucid drops on the surface of the ground, and are known by the name of dew.

The clouds in which the condensed vesicles of vapor are collected, are affected by an attraction which draws them toward the mountains and highest points of the surface of the earth. Collected there, they undergo a change, by which they form into drops, and are deposited in the form of rain; and hence, by their natural gravitation, they find their way through the pores and interstices of the earth, and in channels along its surface, forming, in the one case, wells and springs in various parts of the earth, where they find a natural exit, or where an artificial exit is given to them, and, in the other case, obeying the form of the surface of the country through which they are carried, they wind in narrow channels, first deepening and widening as they proceed, and are fed by tributary streams until they form into great rivers, or spread into lakes, and at length discharge their waters into the sea.

The process of evaporation is not confined to the sea, but takes place from the surface of the soil, and from all vegetable and animal productions. The showers which fall in summer, first scattered in a thin sheet of moisture over the surface of the country, speedily return to the form of vapor, and carry with them, in the latent form, a quantity of heat, which they take from every object in contact with them—thus moderating the temperature of the earth, and refreshing the animal and vegetable creation.

A remarkable example of evaporation on a large scale is supplied by that great inland sea, the Mediterranean. That natural reservoir of water receives an extraordinary number of large rivers, among which may be mentioned the Nile, the Danube, the Dnieper, the Rhone, the Ebro, the Don, and many others. It has no communication with the ocean, except by the straits of Gibraltar, and there, instead of an outward current, there is a rapid and never-ceasing inward flow of water. We are, therefore, compelled to conclude that the evaporation from the surface of this sea carries off the enormous quantity of water constantly supplied from these sources. This may, in a degree, be accounted for by the fact that the Mediterranean is surrounded by vast tracts of land on every side except the west. The wind, whether it blow from the south, the north, or from the east, has passed over a considerable extent of land, and is generally in a state, with respect to vapor, considerably below saturation. These dry currents of wind, coming in contact with the surface of the Mediterranean, draw off water with avidity, and passing off, are succeeded by fresh portions of air, which repeat the same process.

CATHEDRAL OF FLORENCE.



IN extent and magnificence the Duomo or cathedral of Florence is among the first ecclesiastical edifices of Europe. It also derives a great interest from its venerable antiquity, and from its being generally considered as the beginning of a new era in the history of architecture. Tuscan writers, who have been rather too lavish of their praise, have said a great deal about the bold abandonment of the Gothic style, and the happy adaptation of the ancient Roman style of architecture in this building, which shows an admixture of several styles, though it certainly has more of the ancient Roman than any work that prece-

ded it in the middle ages. Its fine double cupola was the first raised in Europe, and in other respects the Duomo of Florence served as a model to succeeding architecture. This cathedral was begun in 1296. The first architect employed upon it was Arnolfo di Lapo, a scholar of Cimabue the old painter. In one hundred and fifty-four years, and under successive artists, it was nearly finished. "But," says an old Florentine author, "the grand cupola was the parturition of the marvellous genius of Ser Filippo Brunellesco, an architect who in his days had no equal." It is related of Michael Angelo Buonarroti, that he used to gaze at this proud dome with rapture, and say it never could be surpassed by mortal man. He afterward surpassed it himself in his dome of St. Peter's, at Rome; but spite of his magnificent boast, the cupola of Florence was a prototype, and had more to do with St. Peter's than the dome of the Pantheon, which Buonarroti said he would suspend in the air. Brunellesco, the author of the cupola, gave the finishing hand to the cathedral. In size, materials, and boldness of conception, it is only inferior among Italian churches to St. Peter's. The walls are cased with black and white marble, and both without and within they are adorned with numerous statues, many of which are beautiful as works of art, or interesting as early specimens of Italian sculpture. As in the cathedral of Milan, where there is a complete army of statues, too many of them are placed in positions where they can scarcely be seen.

Like other old buildings, the cathedral of Florence has been subjected to the caprices of power and the bad taste of despotism. The façade was almost half incrustated with beautiful marble, and additionally adorned with many statues and bassi-relievi, executed from designs by the venerable Giotto, one of the fathers of painting—one of the immortal Italians who dug up the fine arts from the grave in which they had been buried for centuries. In 1586, without any visible motive, a grand-duke of the house of Medici demolished this antique front, and began another on a totally different design. This new façade was very slowly executed, and never finished; and in 1688 another grand-

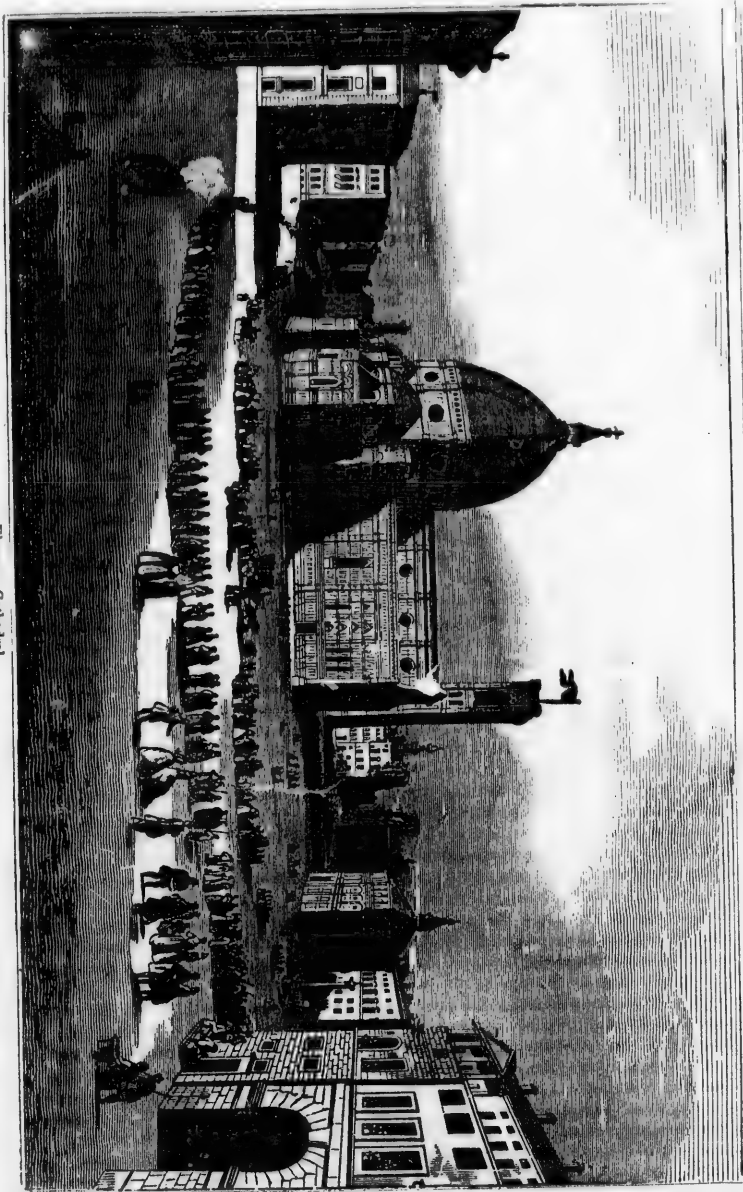
duke, whose taste it did not please, knocked it all down, just as his predecessor had demolished the venerable works of Giotto. For several years the front of the church presented nothing but bare unsightly walls; and then, on the occasion of some ducal marriage, the reigning Medici had it shabbily painted in fresco, and in that condition it remained for upward of a century. The spirited republicans, the merchants and manufacturers of old Florence, with whose money the vast cathedral was originally built, could afford to lavish costly statues and the most precious marbles; but the population, enterprise, and wealth of the country had suffered a sad blight under the despotic government which succeeded the commonwealth, and the grand-dukes could only provide a little plaster and paint for a building which was the boast of the city, as it was the glory of the old republicans. The Medici—that family of merchant-princes whose virtues and abilities went out like lamps lacking oil, almost immediately after their assumption of absolute power—kept their marbles, their "porphyry, jasper, agate, and all hues" to heap upon their own inglorious tomb, in the church of San Lorenzo; and even that monument of their vanity and tawdry taste they never finished.

Seven great doors, three in front and two on either side, give admittance to the interior of the Florence cathedral. These doors are richly ornamented. Giovanni di Pisa and Ghirlandaio both employed their genius upon them. The floor of the church is paved with rich variegated marbles, disposed in a beautiful manner. Italian writers, who deserve our love by the fond, minute attention they have paid to such matters, record that the pavement of the great central aisle was laid down by Francesco di San Gallo; that round the choir by the versatile and great Michael Angelo; and the rest by Giuliano di Baccio d'Agnolo. The windows are smaller and fewer than usual, and the glass being painted with the deep rich tints common in ancient glass-staining, admits but a subdued light. As Forayth observes, "Here is just that 'dim religious light' which pleases poetical and devout minds." This light almost becomes "a darkness visible" in the choir, for the cupola or dome under

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Florence Cathedral



which it stands is closed at top, and admits no flood of sunshine like the dome of St. Peter's. The choir is in itself a blemish. It is of an octagonal form, to correspond with the shape of the cupola, which is not circular, but octagonal, or eight-sided. It is enclosed by a colonnade which is fine, considered apart and by itself, but its Ionic elevation is at variance, and jars with the rest of the building. Some curious bassi-relievi enrich the choir, and high overhead the interior of the cupola is covered with fresco paintings—the work of Federico Zuccheri and Giorgio Vasari.

The solemn old church is rich in associations and historical recollections. Here are the tombs of Giotto the painter, Brunellesco the architect, and Marsilius Ficinus, the reviver of the Platonic philosophy, and the friend and instructor of Lorenzo the Magnificent. Here, on the 26th day of April, 1478, when high mass was performing, and just as the priest held up the host, the blood of Giuliano de Medici was shed by the Pazzi; and his brother Lorenzo, clinging to the horns of the altar, and afterward flying into the sacristy, escaped with difficulty from those determined conspirators, who would have restored liberty to their country, but who set about it in a wrong way, and mostly from violent and personal motives, and who, moreover, leagued themselves with the king of Naples, the greatest tyrant in Italy, and with other despots who hated liberty even more than they hated the Medici. Here, some years before, when Constantinople was trembling at the approach of the Turks, the Greek emperor, half a fugitive, and wholly a mean supplicant and beggar, sat side by side with the pope, consenting to renounce the schisms and heresies of the Greek church; and engaging (without consulting them) to bring all his people into the bosom of the church of Rome, on conditions agreed upon, that the pope should procure him arms, treasures, and the assistance of the catholic princes of Europe. Here the German emperor, Frederick III., forgetting that the holy spirit of the place was one of peace and good-will to all men, knighted some scores of the bravest or fiercest of his cut-throat soldiery. A portrait recalls the memory of the greatest of all Florentines,

and shows the tardy repentance of his ungrateful countrymen. "An ancient picture by Orcagna, in which is painted the divine poet Dante, is placed here in consequence of an express decree of the Florentine republic; and this is the only public memorial we possess of that great master of Tuscan poetry." Such are the melancholy words of an old Florentine writer, who, like all his countrymen, deplored that the bard should have died in poverty and exile, and have left his strictly-guarded ashes in a foreign state. Next to this picture of Dante is the portrait of an English soldier of fortune—the renowned and infamous condottiero Sir John Hawkwood, who betrayed and sold the Pisans, in whose service he was, to their bitter enemies the Florentines.

In another part of the church there is a curious old portrait of Giotto. Brunellesco has the honor of a bust, as well as that of a Latin epitaph, on his tomb. This epitaph, which was written by Carlo Zuppoli of Arezzo, "poet and secretary of the republic," is remarkable, as it includes the original idea of the inscription in St. Paul's to the memory of Sir Christopher Wren. The Florentine inscription tells the reader to look at the cupola to form a notion of Brunellesco's excellence in architecture. The inscription to Wren, which is better turned, says, "Reader! if you would behold his monument, look around you."

In various parts of the cathedral, there are statues by Baccio Bandanelli, Savino Rovezzano, and other early artists. The chapels which shoot off from the side aisles are rich in pictures, sculpture, and relics. The campanile or belfry, which is the square tower that the reader will see in our engraving, surmounted with a flag, is close to, but wholly detached from, the body of the cathedral. This was a common method in old Italian churches, where the bells were hung, not in the temple, but in a separate tower near to it. Instances of this occur at the celebrated cathedral of Pisa, at the church of Santa Chiara in Naples, and in many other places. The campanile of Florence is light and airy. It is coated on the outside with variegated marble, and studded here and there with statues. Giotto the

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painter drew the designs on which it was erected. And here it is worthy of remark that nearly everyone of these early artists was not a mere painter, or sculptor, or architect, but united in himself the knowledge and practice of all the three arts, besides being skilled in civil engineering, and, in most cases, a poet, or an accomplished musician, to boot. They were a wonderful set of men, who suddenly sprung up and flourished, and filled their native cities with beauty, in the midst of a most turbulent liberty, when wars and factions shook the peninsula from one end to the other, and every citizen or burgess of the new states of Tuscany and Lombardy was of necessity a soldier. The impulse they gave lasted some years after the decline of freedom; but Italy never saw such men in the tranquillity that arose out of confidence and despotism.

Opposite to the principal entrance of the cathedral there stands another detached building, which the reader will see in our view. This is the baptistery, which it was unusual not to include in the church, but to erect apart. At Pisa, as here, and in many other places, the baptistery is a separate edifice, rising near the cathedral. This baptistery was not confined to one parish: all the children born in the city and suburbs used to be christened in it; and as the population in the thirteenth, fourteenth, and fifteenth centuries, was immense, the baptismal fonts must have presented very busy scenes. A notion may be formed of the extent of the population from a fact mentioned by Machiavelli. He says that the bells of the campanile sounding the tocsin would, in a few hours, bring together one hundred and thirty-five thousand well-armed men, and all these from Florence alone with the adjoining valley of the Arno.

The baptistery is an octagonal building with a low dome supported by many granite columns. Its interior walls are lined and the pavement is inlaid with marble. The concave of the dome is covered with mosaic, the work of Andrea Tafi, one of Cimabue's pupils. But the glory and marvel of the baptistery lie in its three great bronze portals, which are wrought into bassi-relievi of exquisite beauty. The most ancient of the three was by Andrea

Pisano, and bears the date of 1330. The other two, which are still more excellent in style, and so beautiful, that Michael Angelo was supposed to say they were worthy of being the gates of paradise, were the work of Lorenzo Ghiberti. The figures and groups of the reliefs refer to events in the life of St. John the Baptist. By the sides of the principal entrance there are two porphyry columns, given to the republic by the Pisans in 1117, in gratitude for important services rendered by the then friendly Florentines, who had kept watch and ward in Pisa while its warlike citizens went to the conquest of Majorca and Minorca. Close at hand, as also in other parts of the city, are some different memorials. They are linked by a heavy iron chain, with which, when secure, the Pisans used to shut up and defend their celebrated port. In 1362 the Florentines took the Porto Pisano, carried away the chain, and hung up fragments of it in their own city as trophies of victory.

The column surmounted by a cross which stands in front of the baptistery is said to have been erected as early as the year 408, in commemoration of a miracle performed on the spot by St. Zenobi, at that time bishop of Florence.

The procession seen crossing the piazza or square of the cathedral in our view is one that annually takes place on the day of Corpus Domini—the Fête Dieu of the French.

JANUARY.



CIVILIZED nations in general now agree to begin reckoning the new year from the first of January. Yet it may seem strange to call that a new season when everything is most inactive and lifeless—when animals are benumbed by the cold, and vegetables are all dead or withered. For this reason, some have thought it best to begin the year in spring, when the face of nature is

really renewed. But as this happens at different times in different years and climates, it has at length been determined to date the commencement of the year, as at present, within a few days after the winter solstice, or shortest day. This always takes place on the 21st of December; and from that time the days are gradually lengthened till the middle of summer: so that the year may properly be said to be now turned.

January, which now stands the first in the calendar, was so placed by Numa Pompilius, when he added it, together with February to Romulus's year: its name is supposed to be derived from the Latin word *janua*, a gate; and as Janus was considered by the Romans to preside over the gates of heaven, the name of the month is supposed to have reference to the opening of a new era, or renewal of time. The Saxons denominated this month "*Wolf-monat*"; because people were always, in that month, more in danger of being devoured by wolves than in any season else of the year; for that, through the extremity of cold and snow, those ravenous creatures could not find other beasts sufficient to feed upon."

Nothing can be more wonderful than the effects of frost. To see the running stream stopped in its course—the lake, that was curled by every breeze, converted into a firm plain—the moist ground dried up, and made as hard as rock; and all this done by an invisible power, in the space of a single night, would be infinitely surprising to one unaccustomed to the sight.

Water, when frozen, is expanded: that is, takes up more room than before: hence, ice is lighter than water, and swims upon it. From this cause, if a bottle full of water hard-corked, be set to freeze, the bottle will be broken, for want of room for the expansion of the water. Water-pipes often burst from the same cause, and hoops fly off from barrels; nay, even a gun-barrel or a cannon, filled with water, and screwed up at the muzzle, has been burst in an intense frost.

The same property produces a very beneficial effect to the husbandman; for the hard clods of the ploughed fields are loosened and broken to pieces by the

swelling of the water within them when frozen. Hence the earth is crumbled, and prepared for receiving the seed in spring.

Snow is the water of clouds, frozen: on a close examination, it is found to be all composed of icy darts, or stars. Its whiteness is owing to the small particles into which it was divided. Ice, when pounded, becomes equally white. Snow is very useful, by covering the plants, and protecting them from the severity of the frost: for, at a certain depth under the snow, the cold always continues the same.

THE LIFE-BOAT.



HE heavy seas which break upon the rugged coasts of Northumberland and Durham render that part of Britain the frequent scene of the most disastrous shipwrecks. In the

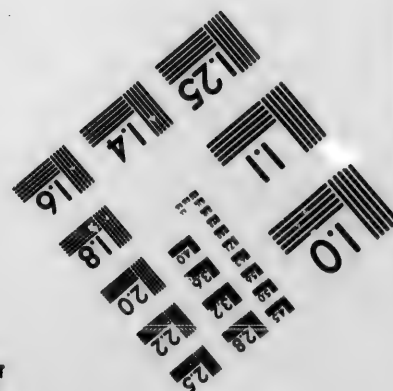
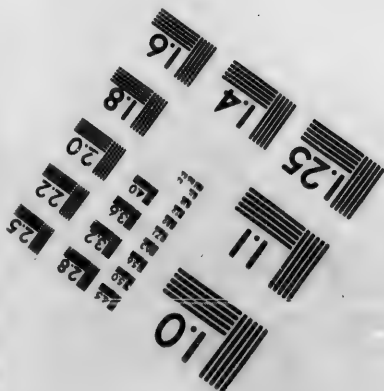
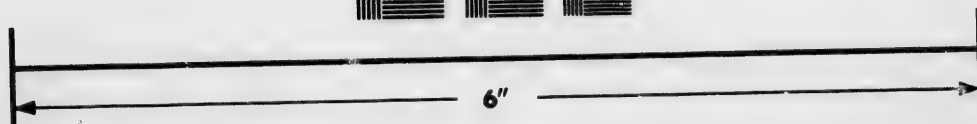
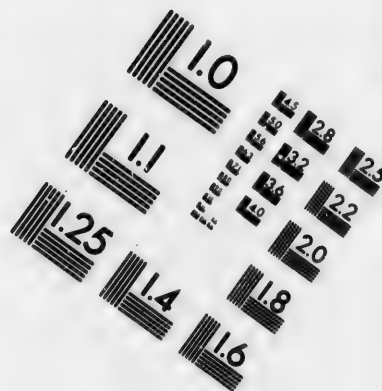
year 1789, the ship *Adventure*, of Newcastle, was stranded, on the south side of Tynemouth Haven, in the midst of tremendous breakers. The crew climbed up into the shrouds for safety, whence they dropped into the sea in the presence of thousands of spectators, not one of whom dared to venture out to their assistance in the common description of boats, although stimulated by the prospect of a high reward. The inhabitants of South Shields were so strongly affected by this melancholy occurrence that a public meeting was called, at which a committee was formed, and empowered to offer premiums for plans of a boat on a principle which should render it impossible to sink in the heaviest sea. Among many which were laid before the committee, that of Mr. Henry Greathead obtained the most general approbation; and, in pursuance of their orders, the first life-boat was constructed by him, and launched on the 30th of January, 1790. The value of this invention was soon fully proved, and its importance to the mercantile navy acknowledged. Mr. Greathead had made his models public, and therefore did not himself receive

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Preparing to Launch the Life Boat.

those advantages which, in justice, he ought to have derived from his ingenuity. In 1802 he accordingly petitioned the house of commons, for the purpose of obtaining from the nation such reward as, in consideration of these circumstances, he might be thought to deserve. The petition was referred to a committee, which particularly directed its inquiries as to the utility of the life-boat, and the originality of the invention claimed by Mr. Greatheed. On the first point, several old seamen and persons employed in shipping were examined. One of the former stated that he had himself been in the life-boat, and had seen her go off scores of times, and never saw her fail in bringing away the crew from wrecks or vessels in distress. No other boat could have gone from the shore at the time the life-boat went. He also stated that, in the event of the life-boat filling with water, she would still continue upright, and not founder, as boats of the common construction did. He had seen her come ashore so full of water that it ran over each side. Another individual had been witness to the wreck of several ships at the same time. Out of one vessel the life-boat took fifteen men, who would otherwise inevitably have perished, as the ship went to pieces immediately after, and the wreck came on shore almost as soon as the boat. The crew of one of these vessels took to their own boat, which sunk, and all but two were lost. It was stated that, on one occasion, when the boat was full of water, the crew all went to one side, in order to try the possibility of upsetting her, which they were unable to accomplish. At the time when this committee was appointed, twelve years had elapsed since Mr. Greatheed's invention, during which period at least three hundred persons had been brought on shore from wrecks and ships in distress off Shields alone. It was fully established that no sea, however high, could upset or sink the life-boat. The originality of the invention being also clearly due to Mr. Greatheed, parliament voted him the sum of twelve hundred pounds sterling, "as a reward for his invention of the life-boat, whereby many lives have already been saved, and great security is afforded to seamen and proper-

ty in cases of shipwreck." The subscribers to Lloyd's presented Mr. Greatheed with one hundred guineas, and voted two thousand pounds for the purpose of encouraging the building of life-boats in different parts of the kingdom. Two years afterward, the emperor Alexander presented Mr. Greatheed with a valuable diamond ring.

Owing to the dangerous character of the Durham and Northumberland coast, and the quantity of shipping belonging to the northeastern ports, the life-boat is oftener launched here than from any other part of Great Britain; and, under the guidance of its crew, more frequently snatches the mariner from destruction.

The great characteristic of the life-boat is its buoyancy. It possesses this requisite quality in consequence of the bottom being hollow and perfectly air-tight; and the sides are also surrounded by several boxes, or compartments, which are also air-tight. We believe that boats are coming into use provided with a set of copper tubes. One upon this plan has lately been constructed at Sunderland. The division of the sides into several parts prevents the boat being endangered in case of its being struck by a cross wave. This, however, can seldom occur, because, both ends being formed alike, the direction of the boat can be changed without exposing it to the rude shocks to which it would be subjected by turning from one point to another in a tempestuous sea. It is also contrived that when the boat ascends the waves, any water which it may have shipped passes out at the lower end; and there are also holes at the bottom, through which whatever remains is immediately discharged. The Sunderland boat was built in the year 1800, ten years after Mr. Greatheed's invention had become known. It is twenty-six feet in length, and the width is nine and a half feet. This boat, on one occasion, would have been knocked to pieces by a cross sea but for the division of the sides into various parts. In the bottom are six air-holes, which are so proportioned to the size and gravity of the vessel that, when full of water, it is discharged in forty seconds. She is managed by six or ten men, as the urgency of the case may require, two of whom steer

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The Life-Boat in a Storm.

with seventeen-feet oars. The oars are secured in their places by a coiled rope. The boat is preserved in repair, and its crew paid, by a small impost on ships entering the harbor. When out of service, it is kept under a substantial shed near the beach, mounted upon a four-wheeled carriage. As soon as the thrilling cry "A wreck!" is heard, the lieutenant of the boat assembles his men; and, after a survey of the ill-fated ship, each proceeds to his place in the boat. When all their arrangements are completed, two or more horses are harnessed to the carriage, and the boat is drawn to the water's edge. By a mechanical contrivance, the frame of the carriage is then brought into a sloping position, and the boat is launched amid the breakers, to pursue its benevolent enterprise.

The men who compose the crew of a life-boat often acquire a sort of moral dignity, occasioned by the exercise of the manly virtues which a faithful discharge of their duties demands, and the sympathetic feelings to which they are habituated by the nature of their vocation. A fine fellow at Tynemouth said to the artist who made the sketches which accompany this description, patting the sides of his boat as if it were a favorite animal, "Have you made a picture of my boat, sir?—She's a good one, and has been with me at the saving of twenty-seven lives in one morning."

The boats, in general, of this description, are painted white on the outside, this color more immediately engaging the eye of the spectator when rising from the hollow of the sea. The person who steers her should be well acquainted with the course of the tides, in order to take every possible advantage: the best method, if the direction will admit of it, is to head the sea. The steersman should keep his eye fixed upon the wave, or breaker, and encourage the rowers to give way as the boat rises to it; being then aided by the force of the oars, she launches over it with vast rapidity, without shipping any water. It is necessary to observe that there is often a strong reflux of the sea occasioned by the stranded wrecks, which requires both despatch and care in the people employed, that the boat be not damaged.

When the wreck is reached, if the wind blows to the land, the boat will come in-shore without any other effort than steering.

In case of a ship being stranded on a part of the coast where the services of the life-boat are inaccessible, it has been recommended to fasten a boom to the boat's bow, by which means the violence of the waves are broken. In a treatise on "Practical Seamanship," by Mr. Hutchinson, an instance is mentioned of the preservation of ten men in a small boat only twelve feet long, by means of a log of wood tied to the boat's bow, which kept her end on to the waves, and preserved her from filling with water.

Life-boats of somewhat similar construction are found in most harbors of our own seaboard, and attached to most of our larger vessels and packet-ships.

AUTOGRAPHY.



THE first thing one does on receiving a letter, is to look whether we recognise the writing as that of a hand familiar to us. "Oh, this is from A," or "This is from B," is a familiar exclamation.

At one glance we recognise A or B, as distinctly as if either stood before us face to face, though both perhaps may be thousands of miles off. Then, again, we collect the various signatures of our friends, or of celebrated persons whom we may never have seen, or known only by their works or fame, and paste them into our albums, and take a delight in looking on them, and comparing their resemblances or differences; in short, every observation of the kind leads us to the conclusion that almost every person's handwriting differs from another, and that there is almost as complete an individuality in their mode of writing as in their countenances, their gait and gestures, or as in their minds.

There is scarcely a collector of such signatures who is not also a diviner of the

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GRAPHY.

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character of the person as deduced from his handwriting. How often do we hear it observed, "This is the writing of a prim, methodical, cold, reserved mortal;"—or, "That is the signature of a gay, volatile, and careless being." How unequivocally can we mark out the writing of a lady from that of a gentleman. How readily that of a lawyer or merchant from that of a fashionable idler, or a "man of wit or pleasure about town." To many, it might appear a very absurd thing to say that there exists an intimate relation between the color of a man's hair and his handwriting, and yet it is well known that the initiated in this matter pretend infallibly to distinguish the writing of a fair-haired person from that of a dark.

A very ingenious writer has afforded a physiological reason for the diversities of handwriting. This diversity he attributes to temperament; that is, a certain condition of the physical and mental constitution of the individual which constitutes his peculiar character. Of these temperaments there are at least half a dozen kinds, pretty distinct and well marked, and perhaps half a dozen more of blended or mixed temperaments, where the shades are less distinguishable. The two extremes of natural temperament or complexion are well known to every one. We shall take, for instance, a man with light auburn hair, blue sparkling eyes, a ruddy complexion, ample chest, and muscular, well-rounded, and agile frame. Such a man will rarely fail to have a smile on his countenance, or a cheerful, perhaps witty saying on his lips. You will never find him moping in a solitary corner, but flitting about in the sunshine and bustle of society, joining in everything, and dwelling on nothing long. When such a man sits down to write, he makes short work of it: he snatches the first pen that comes in the way—never looks how it is pointed—dabs it into the ink, and then dashes on from side to side of the paper in a full, free, and slip-slop style, his ideas—or at all events his words—flowing faster than his agile fingers and leaping muscles can give them a form. Such a one's handwriting can never be mistaken; it is like his own motions, hop-step-and-jump. But, on the contrary, select a man with deep black hair, black

eyes, brown or sallow complexion, and thin spare form, you will generally find him alone, and silently meditating, or sitting solitary amid crowds—of few words, of slow and deliberate action. You need scarcely be told how such a man sets about writing. After weighing well his subject in his mind, he sits down deliberately, selects and mends his pen, adjusts his paper, and in close, stiff, and upright characters traces with a snail's pace his well-weighed and sententious composition. There can be no mistake in tracing the two handwritings which we have just described; and an adept in the science can not fail in astonishing his audience with a sketch of the leading peculiarities of the mind and manners of each. But there are many intermediate shades of temperament, and many circumstances which go to modify the natural tendencies of the mode of writing, which fall to be considered. We shall, in the first place, give the following classified table of temperaments:—

1. Vigorous, light-haired, excitable temperament, what is commonly called the sanguine. The handwriting large, flowing, open, and irregular.

2. Dark-haired, excitable temperament, with brown florid complexion. The writing small, equal, and rather free and easy, with a firm and full stroke.

3. Light-haired, little excitable temperament; the complexion brown or sallow; the form spare. The writing less free and more methodical than No. 1, but less vigorous and less decided than No. 2.

4. Dark-haired, slowly excitable temperament; dark complexion, spare form, and melancholic habit. Small, cramp, upright writing, without ease or freedom—evidently slowly penned.

5. Feeble, light-haired, little excitable temperament; character timid and nervous. The writing small, unequal, and feebly traced, or not written with decision.

6. Mixed temperament, combining two or more of the above.

There are various combinations of these, which it would be unnecessary to particularize. Education and particular training of course make great changes on the natural tendency of the handwriting: thus men of business acquire a mechanical style

of writing, which obliterates all natural characteristics, unless in instances where the character is so strongly individual as not to be modified into the general mass. The female hand is also peculiar. Generally it is more feeble and less individual than that of the male. In the present day, all females seem to be taught after one model. In a great proportion, the handwriting is moulded on this particular model: those only who have strong and decided character retain a decided handwriting. We often find that the style of handwriting is hereditary: sons frequently write very like their fathers; and this they do independent of all studied imitation, because the temperament happens to be hereditary also. A delicate state of health, especially if it has occurred in boyhood, has a considerable effect in modifying the natural form of the handwriting; thus sometimes connecting the free and flowing hand of the sanguine temperament into a more staid and methodical one.

A deficiency of early culture must also have a considerable influence on the form of writing. The forms, too, have varied in different historical eras. Before the introduction of printing, more pains seem to have been bestowed on penmanship. Ancient manuscripts are often found written in a beautiful, upright, and well-formed character, more in the style of print than the modern careless and flowing lines. This is easily to be accounted for: almost all that is worth preserving is now committed to that mighty engine of intelligence, both to present and future ages, the press, and therefore less care is bestowed on the original manuscript. The compositor and the pressman have now taken the place of the ancient scribe and copyist.

But even the individual handwriting varies from its character at various periods of life. In youth it is raw and unformed; in manhood it assumes its full character; and in old age it suffers somewhat of decay. Circumstances also affect its form not inconsiderably. No man is likely to dash off a note on his marriage-day in the same style that he would set about writing out his last will and testament. Our moments of joy are impressed upon the symbolical representations of them, just as are our hours of bitterest sorrow. We of-

ten approach our familiars in a scrawl, as if imprinted by birds'-claws instead of quill feathers, and which we would not deliberately despatch to those that we are accustomed to look up to with respect or awe.

Ease and freedom, and an indifference to please, are the prerogatives of rank and fashion; and hence it is probable that the most wretched scrawls have become fashionable among those who ever strive to ape the manners of the great. There are also, no doubt, national peculiarities in handwriting as well as individual. The Frenchman will show a volatility and spirit in his writing very different from the sedate and thoughtful German. The northern Russ or the Calmuk Tartar must have a different fist altogether from that of the soft and voluptuous native of Hindostan.

We throw out these few hints to collectors of autographs. Let them arrange and classify their specimens, and form of them a *catalogue raisonnée*. Thus, in the end, may some philosopher among their number elevate the pursuit into a science, at least not inferior to the ancient ones of palmistry, astrology, and divination, or to the modern ones of mesmerism, hypnotism, homeopathy, or hydropathy.

THE ORANGE-TREE.



THE citron family of plants comprehends four distinct species—the citron, the lemon, the orange, and the shaddock; and the orange and lemon have many varieties. Even in the

East, where they are native, they are not a little capricious in their growth, the fruit and even the leaves frequently altering, so that it is not easy to say which is a distinct species and which a variety. They continue flowering during nearly all the summer, and the fruit takes two years to come to maturity; so that for a considerable period of each year, a healthy tree ex-

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hibits every stage of the production, from the flower-bud to the ripe fruit, in perfection at the same time. They are all either small trees or shrubs, with brown stems, green twigs and leaves, bearing some resemblance to those of the laurel. We can not, however, judge of the size of the orange-tree from the specimens ordinarily seen in England and other northern countries. In parts of Spain there are some old orange-trees forming large timber; in the convent of St. Sabina, at Rome, there is an orange-tree thirty-one feet high, which is said to be six hundred years old; and at Nice, in 1789, there was an orange-tree which generally bore five thousand or six thousand oranges, and was fifty feet high, with a trunk requiring two men to embrace it. The size depends much upon the age of the plant.

All the citron family are natives of the warmer parts of Asia, though they have been long introduced into the West Indies, the tropical parts of America, the Atlantic isles, the warmer countries of Europe, and even Britain. The orange is a taller and more beautiful tree than either the citron or the lemon; but, like them, has prickly branches in its native country. It was originally brought from India. Whether it was originally a Chinese fruit seems doubtful, as it is not mentioned by Marco Polo, who is so circumstantial in describing all the productions of that empire. Yet the Portuguese found it there, and one of the missionaries relates that the tree was still standing at Canton, from which the seed was taken by the missionaries and sent to Portugal. The first distinct mention of the orange is by the Arabs. It is noticed by Avicenna; and Galessio (in whose "Traité du Citrus," published at Paris in 1811, the history of this fruit was first carefully traced) states that, when the Arabs penetrated to India, they found the orange tribe there further in the interior than Alexander had advanced. They brought them thence by two routes: the sweet ones, now called China oranges, through Persia to Syria, and thence to the shores of Italy and the south of France; and the bitter oranges, commonly called Seville oranges, by Arabia, Egypt, and the north of Africa, to Spain. At the time that the people of

Europe first visited the Levant in great numbers—that is, during the crusades for the delivery of Syria from the dominion of the Saracens—oranges were found to be abundant in that country. Though they were in reality cultivated trees, their number, and the beauty and excellence of their fruit, naturally caused the adventurers (who were not very conversant with natural history, and not a little prone to romance and credulity) to believe and state that these were indigenous to the country, and formed a portion of the glories of the "Holy Land." The fables of the profane writers, and the ambiguity of the description of vegetables in holy writ, helped further to confirm this opinion. As the oranges were of the form of apples, and the color of gold, it did not require much stretch of the imagination to make them the golden apples of the garden of the Hesperides.

There is certainly no evidence to show that the orange was known to the ancients either in Europe or Syria; but there is much to demonstrate that we are indebted for the first knowledge of it to the Arabs, who, with their zeal to propagate the religion of the Koran, were also anxious to extend the advantages of agriculture and medicine. The sweet orange which they introduced was not, strictly speaking, that which has since been called the China orange, and which under that name has been introduced into Spain and Portugal, as well as St. Michael's, and other Atlantic isles, and the West Indies; but rather the orange which was known in Italy before Vasco de Gama doubled the cape of Good Hope: when the Portuguese reached India, they found the orange there, and also in China, which was visited for the first time by sea in the early part of the sixteenth century. Although the oranges of St. Michael's in the Azores are now the best that are to met with in the European market, they are not indigenous productions of that island; but were sent there by the Portuguese, as the same fruit was originally sent to the American continent by the Spaniards. In the middle of a forest, on the banks of the Rio Cedeno, Humboldt found wild orange-trees laden with large and sweet fruit. They were probably the remains of some old

Indian plantations : for the orange can not be reckoned among the spontaneous productions of the New World.

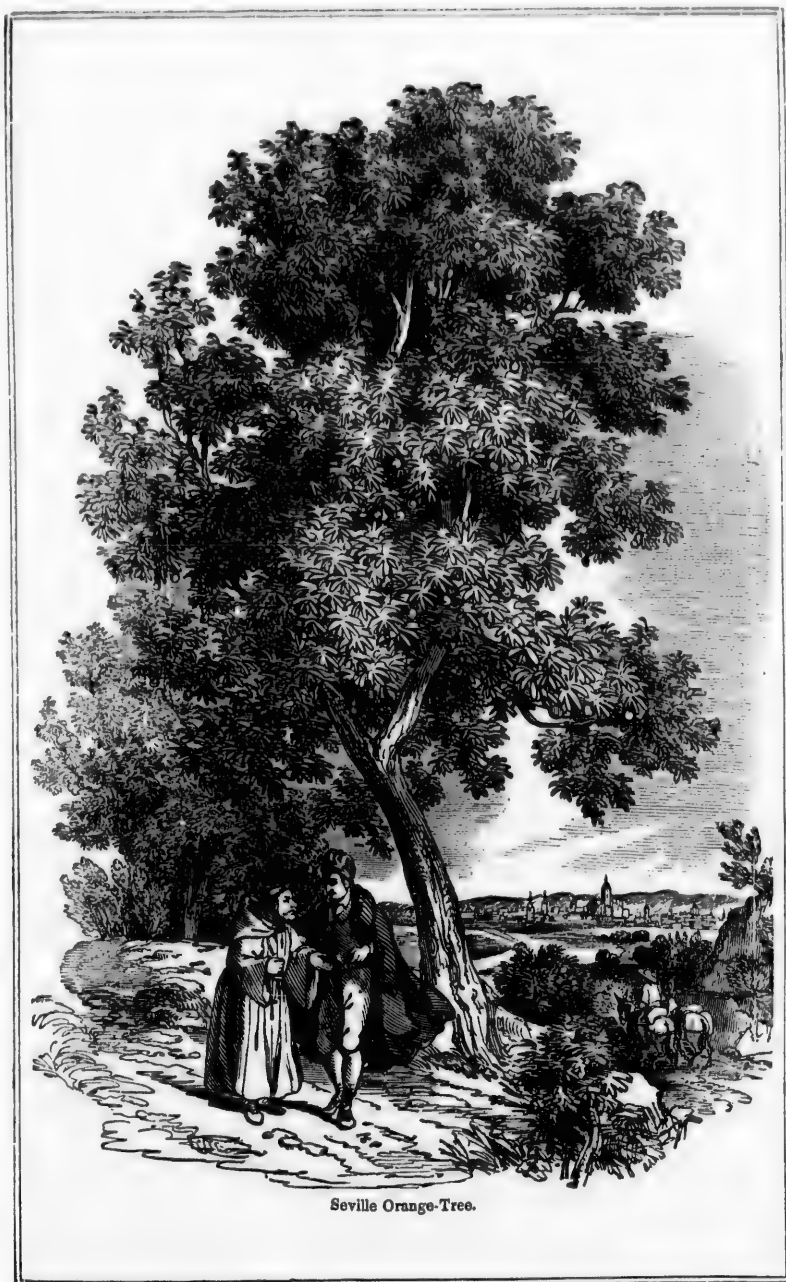
Many varieties of the orange family are now cultivated in Portugal, Spain, France, Italy, and Greece. In the first two countries they especially abound—in Algarve, and in the fine plains of Andalusia, on the banks of the Guadalquivir. The latter is the place from which the bitter or Seville oranges are chiefly obtained. In Algarve and Andalusia the orange-trees are of great size. Extensive orchards of them have formed the principal revenue of the monks for several centuries ; and in the latter province, the craggy mountains of which are covered with gardens, and vineyards, and forests abounding in fruit, the flowers of the orange fill the air with their perfume, and lead the imagination back to those days which the Moorish historians and poets delight in describing, when the land which they conquered was adorned with all the refinements of their taste and intelligence, and the luxuries of the East were naturalized in the most delicious regions of the West. In Cordova, the seat of Moorish grandeur and luxury, there are orange-trees still remaining, which are considered to be six hundred or seven hundred years old ; the trunks of these old trees have begun to decay, and when they are diseased they are covered with a kind of lichen which is supposed to be peculiar to the orange.

The precise time at which the orange was introduced into England is not known with certainty, but probably it may have taken place not long after its introduction into Portugal, which was in the early part of the sixteenth century. The first oranges, it has been stated, were imported into England by Sir Walter Raleigh ; and it is said that Sir Francis Carew, who married the niece of Sir Walter, planted their seeds, and they produced the orange-trees at Beddington, in Surrey, of which Bishop Gibson, in his additions to Camden's "Britannia," speaks of as having been there a hundred years previous to 1695. As these trees always produced fruit, they could not have been raised from seeds ; but they may have been brought from Portugal, or from Italy, as early as the close of the sixteenth century. The

trees at Beddington were planted in the open ground, with a moveable cover to screen them from the inclemency of the winter-months. In the beginning of the eighteenth century they had attained the height of eighteen feet, and the stems were about nine inches in diameter ; while the spread of the largest of the number was twelve feet one way and nine the other. There had always been a wall on the north side of them, to screen them from the cold in that quarter ; but they were at such a distance from the wall as to have room to spread, with plenty of air and light. In 1738 they were surrounded by a permanent enclosure, like a greenhouse. They were all destroyed by the great frost of the following winter ; but whether this was wholly owing to the frost, or partly to the confinement and damp of the permanent enclosure, can not now be ascertained. At Hampton Court there are many orange-trees, some of which are said to be three hundred years old. They are generally moved into the open air about the middle of June, when the perfume of their blossoms is most delicious. Orange and lemon trees have been cultivated in the open air in England. For a hundred years, in a few gardens of the south of Devonshire, they have been trained as peach-trees are against walls, and sheltered only with mats of straw during the winter.

The orange, naturally produced in warmer climates than our own, has been rendered our property by commerce in a very remarkable degree. It is common in Florida and other parts of the south, and may be procured at little more cost than the commonest of our domestic fruits in the more northern states ; while it is perhaps the most refreshing and healthy of all the fruits of warm countries. It has thus become a peculiar blessing to us ; for while it offers a gratification within the reach of the poorest, it is so superior to other fruits, that it can not be despised for its cheapness, even by the richest. The duty upon oranges imported into Great Britain in the year 1834 amounted to sixty-eight thousand pounds sterling, at the rate of two shillings sixpence for a package not exceeding five thousand cubic inches. Assuming the cubical contents of an orange as ten inches, there were five

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Seville Orange-Tree.

hundred in each package; and thus we see that two hundred and seventy-two millions of this fruit were annually imported, allowing about a dozen oranges a year to every individual of the population.

HISTORY.



It may be asked how are we to judge of the general consequences of principles unlimited in their operation? The brief span of human existence will permit us to make but few, very few, observations upon the course of human affairs, ere the curtain falls, and the scene of life is ended.

But are we then left like the benighted, tempest-tost mariner, with the deep, unfathomable gulf of oblivion behind, and the dark, portentous clouds of doubt and uncertainty brooding over the future? without chart to designate our relative situation with respect to those nations which in times gone by have risen, flourished, and fallen—to point to the rocky shoals upon which so many noble ships of state have been wrecked?—nor to the awful whirlpool of luxury and effeminacy, of mental, moral, and physical degeneracy and degradation within whose chaotic vortex nation after nation has been engulfed and sunk to rise no more? Have we neither compass nor pole-star, by which our course may be directed to the fair haven of peace and prosperity? Yes, thank Heaven! we are presented with the most inestimable treasury of human experience; the storehouse of wisdom is at hand, and he who will may open the golden portals, enter the sanctuary of knowledge, and become the recipient of those joys inseparable from the benign influence of that mental illumination which shall insure moral rectitude. Upon the *historic* page, with a retrospective glance, we may behold generation following generation in rapid succession upon the theatre of life. Here, to the philosophic mind which reasons of causes from their consequences, is pre-

sented a truth of mighty import: which is, that to a want of research and investigation is to be attributed the degeneracy of those holy impulses of reverence and adoration toward the sovereign Arbiter of the universe, which constitute the basis of present felicity and of future hope. Thus have designing hypocrites, in the cupidity of their hearts, been enabled to shackle the unsuspecting, unreflecting mind, and rear upon the dark foundations of ignorance the deformed superstructure of credulous superstition, and institute those rites the observance of which would better comport with the ferocious disposition of the tiger, that, delighting in blood, bathes his fangs in the gore of defenceless flocks and herds, than that love of benevolence and mercy which should characterize man. Who can without emotion reflect upon the horrid scene of thousands and tens of thousands sacrificing themselves before the car of Juggernaut?—multitudes perishing in the waves of the Ganges?—the Indian widow writhing in the agonies of death, upon the flaming fagots of her husband's funeral-pile?—or the hosts of beauteous youth, who, like summer flowers withered and laid low by the blasts of livid lightning, have been offered as victims upon Moloch's blood-stained altars? Yet these are to be imputed to the blind submission of men to the dictation of leaders, whose declarations, however devoid of reason, are adopted as oracular truths, to question which is little less than heresy, and in support of which are enlisted all those inveterate prejudices and every impulse of bigotry of which the uninstructed mind is susceptible.

To the same cause are also to be referred the fanatical proceedings of the followers of the hermit Peter, who, in their crusades, not only spread dismay and death through the land of Palestine, but literally whitened the country over which they passed in their way thither with the bleaching bones of the wretched votaries of that wild delusion.

Though the increased knowledge of later days has tended to destroy the power of fanaticism over the minds of men where intelligence abounds, still the same elements are at work wherever ignorance is found.



Portrait of Benjamin Franklin.

CHARACTER OF FRANKLIN.



FEW men ever possessed such opportunities or talents for contributing to the welfare of mankind; fewer still have used them to better purpose: and it is pleasant to know, on his own authority, that such extensive services were rendered without any sacrifice of his happiness. In his later correspondence he frequently alludes with complacency to a favorite sentiment which he has also introduced into his "Memoirs"—that "he would willingly live over again the same course of life, even though not allowed the privilege of an author, to correct in a second edition the faults of the first."

His remarkable success in life and in the discharge of his public functions is not to be ascribed to genius, unless the term

be extended to that perfection of common sense and intimate knowledge of mankind which almost entitled his sagacity to the name of prescience, and made "Franklin's forebodings" proverbially ominous among those who knew him. His pre-eminence appears to have resulted from the habitual cultivation of a mind originally shrewd and observant, and gifted with singular powers of energy and self-control. There was a business-like alacrity about him, with a discretion and integrity which conciliated the respect even of his warmest political foes; a manly straight-forwardness before which no pretension could stand unrebuked; and a cool tenacity of temper and purpose which never forsook him under the most discouraging circumstances, and was no doubt exceedingly provoking to his opponents. Indeed, his sturdiness, however useful to his country in time of need, was perhaps carried rather to excess; his enemies called it obstinacy, and accused him of being morose and sullen. No better refutation of such a charge can be wished for than the testimony borne to his

disposition by Priestley, a man whom Franklin was justly proud to call his friend. In private life he was most estimable; two of his most favorite maxims were, never to exalt himself by lowering others, and in society to enjoy and contribute to all innocent amusements without reserve: his friendships were consequently lasting, and chosen at will from among the most amiable as well as the most distinguished of both sexes, wherever his residence happened to be fixed.

His chief claims to philosophical distinction are his experiments and discoveries in electricity; but he has left essays upon various other matters of interest and practical utility—an end of which he never lost sight. Among these are remarks on ship-building and lighthouses; on the temperature of the sea at different latitudes and depths, and the phenomena of what is called the Gulf-stream of the Atlantic; on the effect of oil poured upon rough water, and other subjects connected with practical navigation; and on the proper construction of lamps, chimneys, and stoves. His suggestions on these subjects are very valuable. His other writings are numerous: they relate chiefly to politics, or the inculcation of the rules of prudence and morality. Many of them are light and even playful; they are all instructive, and written in an excellent and simple style; but they are not entirely free from the imputation of trifling upon serious subjects. The most valuable of them is probably his autobiography, which is unfortunately but a fragment.

As a speaker, he was neither copious nor eloquent; there was even a degree of hesitation and embarrassment in his delivery. Yet, as he seldom rose without having something important to say, and always spoke to the purpose, he commanded the attention of his hearers, and generally succeeded in his object.

His religious principles, when disengaged from the skepticism of his youth, appear to have been sincere, and unusually free from sectarian animosity.

Upon the whole, his long and useful life forms an instructive example of the force which arises from the harmonious combination of strong faculties and feelings when so controlled by sense and prin-

ciple that no one is suffered to predominate to the disparagement of the rest.

PRIDE, OFFENSIVE AND DEFENSIVE.



THE French have two words to express pride — *la fierté*, and *l'orgueil*. A lady being asked to define the difference, replied very promptly and happily that the first was "de-

defensive" and the second "offensive pride." The distinction is important. Of the first, it is impossible to have too much; of the second, it is equally impossible to have too little. Defensive pride is that proper self-respect which will not allow its possessor to commit an unworthy, a base, or a mean action. It is that which urges us to distinguish ourselves above the crowd of the idle, the ignorant, the dilatory, and the variable, by our industry, our wisdom, our perseverance, and our constancy; and which prompts us to win the applause of our fellows by our goodness, and consequent greatness. Defensive pride is the shield with which we keep off the assaults of those who, openly or insidiously, would bring us down to a lower moral level than our judgment and our conscience inform us we ought to hold: it is the amulet with which we preserve ourselves from the machinations of evil, and the perfume by aid of which we may walk amid the haunts of vice without contamination. Without a due proportion of pride like this, in some one of its various developments, no man yet has ever arrived at distinction, or left behind him a name which the world holds in honor. It is the nurse of emulation and ambition, and becomes, when properly or opportunely excited, the spur to urge the timid or the sluggish to do the good which another has left undone—the steel upon some flinty nature, eliciting heat and light which might otherwise have remained latent for ever. Pride of this kind sits as well upon the humblest as upon the loftiest. It is the pride of a man independent of his rank, his wealth, or his station; the

suffered to predominate of the rest.

PRIDE—OFFENSIVE AND DEFENSIVE.

THE French have two words to express pride — *la fierté*, and *l'orgueil*. A lady being asked to define the difference, replied very promptly and happily that the first was "defensive pride," and the second "offensive pride." Of the first, we have too much; of the second, it is impossible to have too much. Pride is that proper self-regard which will not allow its possessor to be unworthy, a base, or a fool; that which urges us to rise above the crowd, to be diligent, and industrious, our wisdom, and our constancy; to win the applause of goodness, and to keep off the assaults of evil. Defensive pride is the armor which, either directly or insidiously, would lower moral level than our conscience informs us it is the amulet with which we protect ourselves from the assaults of the world, and the perfume by which we mark amid the haunts of sin. Without this pride like this, in some of our developments, no man is distinguished, or left behind which the world holds in esteem of emulation and emulation, when properly or the spur to urge the good to do the good which is the steel upon the sword, exciting heat and light. We have remained la- zers of this kind sits as upon the loftiest as upon the loftiest of a man independent of his station; the

pride of the gold, and not of the stamp upon it. Pride of this kind has found its most poetical and at the same time its best and truest utterance in the song of Robert Burns, "A man's a man for a' that." Every one who feels his heart glow at the sentiments expressed in that glorious lyric, feels defensive pride; and if he continues to feel it, and makes it the guide of his life, he becomes—though he toil all day, and far into the night, for hard and scanty bread; though he "wear hodden gray," and dwell in a hut scarcely sheltered from the winds and rains of heaven—an ornament to his kind, and a blessing to himself.

Offensive pride, on the other hand, shows the little mind, as defensive pride exhibits the great one. It is the pride of externals, as defensive pride is that of internals; the pride of the adventitious circumstances in which a man is placed, and not of the qualities of the man himself. Offensive pride assumes various forms, and is in all of them equally a proof of ignorance, presumption, and heartlessness. To the man of sense, it is always ridiculous; and wherever it does not excite the anger, it is sure to excite the contempt of the well-minded. When we see a man proud of his high lineage, and expecting that we shall do homage to him for the virtues of his ancestors, although he have none of his own, we despise him all the more for the highness of his name; his pride and his lordly airs gall us, if we are of stern nature; and provoke us to laughter, if we are of the number of those who can find amusement in the contemplation of human folly: proud men of this class have been happily compared to turnips and potatoes—all the best part of them is under ground.

Equally, if not more offensive, is the pride of wealth. This pride is the parent of every meanness. We may be quite sure, when we see a man proud of his money, that he has gained it in a dirty manner, and that he makes really, though not perhaps visibly to all men's eyes, a dirty use of it. If he have a large house, it is not for use, but for ostentation. If he have fine carriages, valuable horses, and footmen in gay liveries, it is that he may excite more attention from the frivolous and unthinking, than some one else who

has hitherto rivalled him. If he give splendid entertainments, it is that he may make the earls or the barons who condescend, or the poor dependents who fawn and cringe, to appear at them, envious of the wealth which their own can never equal. If he give charity, it is that it may be blazoned abroad; for he will refuse a dollar to a deserving object if the donation is to remain secret, when he would give a hundred to a less deserving one if the fact could be trumpeted in the newspapers. Such a man pays for the publication of his charitable deeds; and not only does not hide from his left hand what his right hand does, but fees the common crier of the streets to promulgate it with embellishments. Such a man is not proud of being charitable, but of being thought so—not thankful for wealth, because it enables him to do good, but proud of it because it gives him the means of attracting more worldly attention than better men, and enables him to ride and drink wine when superior merit walks and can only afford small beer.

There is also a pride of beauty, a pride of strength, a pride of skill, and a pride of talent, which all become offensive if they are loudly expressed, and are unsupported by other qualities which it is the province of a defensive pride to foster in the mind. When a woman is proud of her beauty, and has neither wit, nor sense, nor good nature, nor any charm of mind that will endure when beauty fades, her pride is offensive. When a man vaunts his skill in any particular pursuit—a skill which may be undoubted—and thrusts it inopportunistically and pertinaciously forward, his pride is offensive: and when a man who has gained some credit for talent is always fearful that he will lose it, unless he daily and hourly impresses the recollection of it upon those with whom he may be brought in contact, his pride is offensive, and is that of a little talent only, and not of a great one. Combined, on the contrary, with defensive, and not with offensive pride, beauty, strength, skill, and talent, become enhanced in our eyes. Beauty then knows and acts upon the knowledge that goodness will lend her additional charms; physical strength learns not to be proud merely of that which it has in

common with the brutes, but to be strong in mind; and skill and talent, conscious that self-praise is no recommendation to the world, resolve to win the world's applause by future good deeds, and not by boasting vaingloriously of the deeds that are past.

There is another great difference between defensive and offensive pride—which is, that while the one invariably keeps its thoughts to itself, the other as invariably shouts them into all men's ears. Defensive pride never makes a boast; but offensive pride is never easy but when the boast is on its tongue. The one is silent, the other is loquacious. Defensive pride is retiring; offensive pride is forward; and the one lives upon the rewards of conscience, while the other only exists upon the babble of the crowd.

There are other kinds of pride which are as offensive as those already mentioned. We would cite, especially, "sensitive pride," and the "pride that apes humility." Sensitive pride is founded, not upon a proper self-respect, but upon inordinate vanity, linked with some degree of cowardice. If it has taken root in the breast of a poor man, or one of inferior station in society, it leads him to imagine insults from the rich and the lofty which are not intended, and to suppose that all the world are thinking how they can show him disrespect, when, in fact, the world is not giving itself the slightest concern about him. But this truth never enters into his mind; for if it did, he would be still more miserable. His consolation is, that the world hates him, and tries to trample him down, and he flies to that rather than to the thought—annihilating to his vanity and self-conceit—that the world most likely does not even know of his existence. In a rich or powerful man, this pride generally springs from some defect, physical or moral, but most often from the former, as in the case of Lord Byron and his lameness. Upon this point his pride was ridiculously sensitive and offensive, and laid bare the weaknesses of his mental constitution—a vanity pained to be conscious of a physical deformity, which rendered him less perfect than the most perfect of his fellow-creatures, and a cowardice that prevented him from rising superior

to the possible sneers of the thoughtless or unfeeling.

Of the "pride that apes humility," it may be truly said that it is, of all kinds of pride, the most offensive. In addition to the bad qualities inherent in a false and unfounded estimate of self, it possesses that of hypocrisy, and no junction can be more odious than that of hypocrisy and pride. Foolish pride may offend, but hypocritical pride offends and disgusts us. The pride of wealth, of rank, of power, of beauty, or of talent, though they may be unjustifiable, at least lean upon something that exists or is supposed to exist; but the pride that apes humility leans upon a lie, which it knows to be a lie. It unites the bad qualities of every other kind of pride, and is, in a manner, the concentrated essence of offensiveness.

THE WILD TURKEY.



HE native country of the wild turkey extends from the north-western territory of the United States to the isthmus of Panama; south of which it is not to be found. In

Canada, and the now densely-peopled parts of the United States, this bird was formerly very abundant; but the progress and aggressions of man have compelled them to seek refuge in the remote interior. It is not probable that the range of the wild turkey extends to or beyond the Rocky mountains. The Mandan Indians, who a few years ago visited the city of Washington, considered it one of the greatest curiosities they had seen, and prepared a skin of one to carry home for exhibition.

It is not necessary to be particular in describing the appearance of a bird so well known in its tame state. The difference consists chiefly in the superior size and beauty of plumage in the wild turkey; for, under the care of man, this bird has greatly degenerated, not only in Europe and Asia, but in its native country. When full

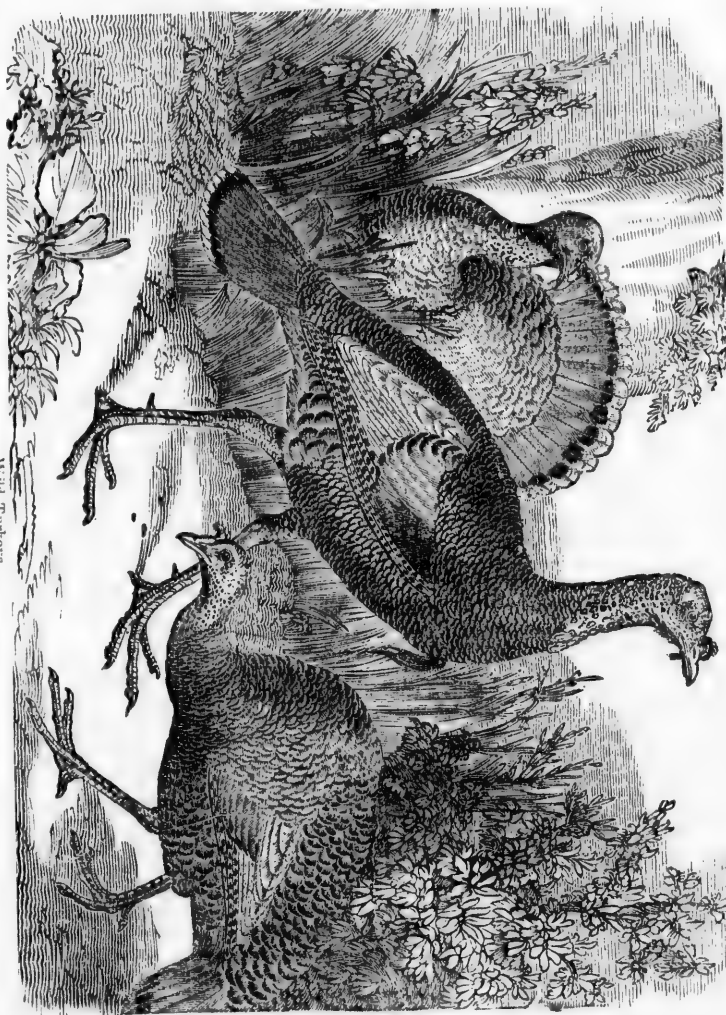
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Wild Turkeys.

grown, the male wild turkey is nearly four feet in length, and nearly five in extent (from wing to wing), and presents in its plumage a rich assortment of colors, brown predominating, which might be vainly sought in the domesticated bird. Altogether his appearance is such as, with other considerations, disposed Dr. Franklin to regret that he, rather than the bald eagle, had not been selected as the national emblem of the United States.

The wild turkeys do not confine themselves to any particular food: they eat maize, all sorts of berries, fruits, grasses, beetles; and even tadpoles, young frogs, and lizards, are occasionally found in their crops; but where the pecan-nut is plenty, they prefer that fruit to any other nourishment. Their more general predilection, however, is for the acorn, on which they rapidly fatten. When an unusually profuse crop of acorns is produced in a particular section of country, great numbers of turkeys are enticed from their ordinary haunts in the surrounding districts. About the beginning of October, while the mast still remains on the trees, they assemble in flocks and direct their course to the rich bottom lands. At this season they are observed in great numbers on the Ohio and Mississippi.

The males, usually termed *gobblers*, associate in parties numbering from ten to one hundred, and seek their food apart from the females; while the latter either move about singly with their young, then nearly half grown, or—in company with other females and their families—form troops, sometimes consisting of seventy or eighty. They are all intent on avoiding the old males, who, whenever opportunity offers, attack and destroy the young by repeated blows on the skull. All parties, however, travel in the same direction, and on foot, unless they are compelled to seek their individual safety by flying from the dog of the hunter, or their progress is impeded by a large river. When about to cross a river, they select the highest eminences, that their flight may be the more certain; and here they sometimes remain for a day or more, as if for the purpose of consultation, or to be duly prepared for so hazardous a voyage. During this time the males gobble obstreperously, and strut

with extraordinary importance, as if they would animate their companions and inspire them with hardihood. The females and young also assume much of the pompous air of the males, the former spreading their tails and moving silently around. At length the assembled multitude mount to the tops of the highest trees, whence, at a signal-note from a leader, the whole together wing their way toward the opposite shore. Immediately after these birds have succeeded in crossing a river, they for some time ramble about without any apparent unanimity of purpose, and a great many are destroyed by the hunters, though they are then least valuable.

When the turkeys have arrived in their land of abundance, they disperse in small flocks, composed of individuals of all ages and sexes intermingled, who devour all the mast as they advance: this occurs about the middle of November. It has been observed that, after these long journeys, the turkeys become so familiar as to venture on the plantations, and even approach so near the farmhouses as to enter the stables and corn-cribs in search of food. In this way they pass the autumn and part of the winter. During this season great numbers are killed by the inhabitants, who preserve them in a frozen state, in order to transport them to a distant market.

Early in March they begin to pair. The sexes roost apart, but at no great distance, so that when the female utters a call, every male within hearing responds, rolling note for note, in the most rapid succession; not as when spreading the tail and strutting near the hen, but in a voice resembling that of the tame turkey when he hears any unusual or frequently-repeated noise. Where the turkeys are numerous, the woods—from one end to the other, sometimes for hundreds of miles—resound with this remarkable noise, uttered responsively from their roosting-places: this is continued for about an hour; and, on the rising of the sun, they silently descend from their perches, and the males begin to strut, as if to win the admiration of their mates. Their process of approach to the females is remarkably pompous and ceremonious; and, in its course, the males often encounter one another, and desperate battles ensue, when the conflict is only

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terminated by the flight or death of the vanquished. With the hen whose favor is thus obtained the male is mated for the season, though he does not hesitate to bestow his attentions on several females whenever an opportunity offers. One or more females, thus associated, follow their favorite and rest in his immediate neighborhood, if not on the same tree, until they begin to lay, when they shun their mates, in order to save their eggs, which the male uniformly breaks if in his power. At this period the sexes separate, and the males, being much emaciated, retire and conceal themselves by prostrate trees, in secluded parts of a forest, or in the almost impenetrable privacy of a canebrake. By thus retiring, using very little exercise, and feeding on peculiar grasses, they recover their flesh and strength, and when this object is attained again congregate and recommence their rambles.

About the middle of April, when the weather is dry, the female selects a proper place in which to deposit her eggs, secured from the encroachment of water, and as far as possible concealed from the watchful eye of the crow. The nest is placed on the ground, either on a dry ridge, in the fallen top of a dead leafy tree, under a thicket of sumach and briers, or by the side of a log: it is of a very simple structure, being composed of a few dry leaves. In this receptacle the eggs are deposited, sometimes to the number of twenty, but more usually from nine to fifteen; they are like those of the domestic bird.

The female uses great caution in the concealment of her nest: she seldom approaches it twice by the same route; and on leaving her charge, she is very careful to cover the whole with dried leaves in such a manner as to make it very difficult even for one who has watched her motions to indicate the exact spot. Nor is she easily driven from her post by the approach of apparent danger; but if an enemy appears, she crouches as low as possible, and suffers it to pass. They seldom abandon their nests on account of being discovered by man; but should a snake or other animal suck one of the eggs, the parent leaves them altogether. If the eggs be removed, she again seeks the male and

recommences laying, though otherwise she lays but one set of eggs during the season. Several turkey-hens sometimes associate, perhaps for mutual safety, deposit their eggs in the same nest, and rear their broods together. Mr. Audubon once found three females sitting on forty-two eggs. In such cases the nest is commonly guarded by one of the parties, so that no crow, raven, or even polecat dares approach it. The mother will not forsake her eggs, when near hatching, while life remains: she will suffer an enclosure to be made around and imprison her rather than abandon her charge.

As the hatching generally occurs in the afternoon and proceeds but slowly, the first night is commonly spent in the nest; but afterward the mother leads them to elevated dry places, as if aware that humidity, during the first few days of their life, would be dangerous to them, they having then no other protection than a delicate, soft, hairy down. In rainy seasons wild turkeys are scarce, because when completely wetted the young rarely survive. At the expiration of about two weeks the young follow their mother to some low, large branch of a tree, where they nestle under her broadly-curved wings. The time then approaches when they seek the open ground or prairie land during the day in search of berries and grasshoppers, thus securing a plentiful supply of food, and enjoying the genial influence of the sun. The young turkeys now grow rapidly, and in the month of August, when several broods flock together and are led by their mothers into the forest, they are stout, and able to secure themselves from the unexpected attacks of their enemies, by rising quickly from the ground and reaching with ease the upper limbs of the tallest tree.

It is rather surprising that, though the introduction of this bird into Europe is comparatively modern, its origin has been so much lost sight of, that eminent naturalists of the last century expressed themselves with great uncertainty concerning its native country. Thus Belon, Aldrovand, Gessner, Ray, and others, thought that it came originally from Africa and the East Indies, and endeavored to recognise it in some of the domestic birds of the an-

cients But its American origin is now clearly ascertained. This bird was sent from Mexico to Spain early in the sixteenth century; and from Spain it was introduced into England in 1524. Since that period they have been bred with so much care, that in England, as we read in ancient chronicles, their rapid increase rendered them attainable at country feasts, where they were a much-esteemed dish, so early as 1585.

THE GRANDEUR OF GOD.

"At His command the lurid lightning flies,
Shakes the firm globe, and fires the vaulted skies."



NOT one of the four elements so magnificently displays the grandeur of God as that of fire. Well might the ancients suppose it to constitute the human soul, for they are similar in their operations. The soul pervades every part of the body, and fire exists in every particle of nature. Like the soul, we observe it quiescent in one body and in another we see it in all its terrific sublimity. Like the soul, we see it in one instance a slave, and in another the master of the world. As the soul is the centre of motion to the human body, so is the burning sun to the solar system. When the soul ceases to move the body, every limb is motionless; and when Joshua commanded the sun to stand still on Gibeon, the earth and moon were still, for they receive their motion from his diurnal revolution. The language of Scripture is correct, for though the sun is fixed in his orbit, he has diurnal motion, and when that ceases, his attendant planets must cease. This has been an eye-sore to many deists. Let them reflect that when the large wheel of a mill is at rest, the whole of the machinery is at rest also. We see the operations of the soul, but not its essence; and we see the effects of fire, but not its substance.

Fire is the mighty autocrat of the uni-

verse—its throne is the footstool of God—and its empire is the grand alembic of nature. Like the Olympian Jove when he arose and rocked the skies with his wrath, it sends forth its herald into the stormy clouds, and shakes the pillars of the universe with its tremendous roar. When the spirit of the storm is roused, it goes forth to battle—it awakens the deep thunders of the artillery of heaven—and sets the skies on fire. The clash of resounding strife rings in our ears. The mighty master comes forth from the dark dungeon in which he was chained, he rides round the ethereal dome in his rapid car wheeled by the whirlwinds, and the halls of heaven echo with the crash of clouds. The mighty monarchs of the earth tremble when the dreadful autocrat levels his artillery at the globe. It was the same autocrat with whom the immortal Franklin made a league, and entered into amicable negotiations. He sent forth his ambassador to the gloomy palace of the autocrat, who was conducted to his presence in a chariot of glass. Peace was settled between them—the dark storm of elemental war rolled away—and the universal rainbow banner was hung out in the east. But the autocrat escaped from the dungeon of the philosopher; he was seen again in battle with the spirits of the storm; and Franklin raised his bayonets against him from every steeple. He was again seen enveloped in his grand and brilliant fireworks in the heavens, and scattering his thunderbolts in every direction. Such is electricity!

We dwell peaceably on the surface of the earth, while oceans of fire roll beneath our feet. In the great womb of the globe the everlasting forge is at work. How dreadful must an earthquake be, when we are told by Pliny that twelve cities in Asia Minor were swallowed up in one night! Not a vestige remained: they were lost in the tremendous maw for ever! Millions of human beings have been swallowed up while flying for safety. In the bowels of the earth the great Jehovah performs his wonders, at the same moment that he is firing the heavens with his lightnings. His thunders roll above our heads and beneath our feet, where the eye of mortal man never penetrated. In the vast vor-

text of the volcano the universal forge empties its melted metals. The roar of Etna has been the knell of thousands, when it poured forth its cataract of fire over one of the fairest portions of the earth, and swept into ruins ages of industry. In the reign of Titus Vespasian, A. D. 79, the volcano of Vesuvius dashed its fiery billows to the clouds, and buried in the burning lava the cities of Herculaneum, Stabice, and Pompeii, which then flourished near Naples. The streets of Pompeii were paved with lava, and it has been discovered that its foundation is composed of the same—proving that the spot had been deluged previous to the birth of Christ. In the streets once busy with the hum of industry, and where the celebrated ancient walked, the modern philosopher now stands and ruminates upon fallen grandeur. While the inhabitants were unmindful of the danger which awaited them—while they were busied with schemes of wealth and greatness—the irresistible flood of fire came roaring from the mountain, and shrouded them in the eternal night. Seventeen hundred years have rolled over them, and their lonely habitations and works remain as their monuments. They are swept away in the torrent of time; the waves of ages have settled over them; and art alone has preserved their memory. Great God, how sublime are thy works! How grand are thy operations! How awful thy wrath! Nations can not stand against thee—a world is but an atom in thy sight!

THE ISLAND OF CAPRI.



HIS most picturesque of islands is situated under the same meridian as the city of Naples, which it immediately faces, and from almost all parts of which it is visible.

It is, indeed, one of the finest and most striking features of the rich and varied scenery which surrounds that capital. It stands at the entrance of the Neapolitan gulf, almost on the line of the horizon; it

is distant about two and a half miles from Cape Campanella, which terminates the bold promontory where Sorrento, Amalfi, and other towns of old fame, are situated; it is about twelve miles from Cape Miseno on the other side of the bay, and rather more than twenty from the city of Naples at the end of the bay. It is composed of hard, calcareous rocks, which are disposed in two picturesque masses with a considerable break or hollow between them. The highest of these two masses, which is to the west, and is called Anacapri, rises between sixteen and seventeen hundred feet above the level of the sea. The whole of the island, when seen at a little distance, looks so precipitous and inaccessible, that the stranger is disposed to wonder how the little towns and white villages he sees on the face of its cliffs ever got there. The color of the masses of rock, when not affected by the glow of sunset, is a pale, sober gray. Tracing all the indents and sinuosities of the rocks, the circumference of the island does not exceed nine miles; yet within this narrow space is crowded an astonishing variety of scenic beauties, remains of antiquity, and historical recollections. The entire surface of Capri is wild, broken, and picturesque. The ancient name of the island was Capræ, and it is said it was so called from being inhabited by wild goats. According to antiquaries, its first human inhabitants were a colony of Greeks from Epirus, who, after many ages, were dispossessed by the citizens of Neapolis (Naples), which then formed part of Magna Græcia, and which, like all the places of note in that portion of Italy, owed its origin to the Greeks. The Roman emperor Augustus seems to have taken entire possession of the island for himself, and to have given the Neapolitan citizens lands in the neighboring island of Ischia as an equivalent. Suetonius, the historian, has recorded a visit to Capri made by Augustus at the close of his life. With a shattered constitution and broken spirits, the world's master left Rome to find a place of quiet rest. Having recruited his spirits a little at Astura, on the shores of the Tyrrhenian sea, and near the mouth of the Tiber, he coasted Campania Felix, and, with a few chosen friends, arrived at



Island of Capri.



Island of Capri.

Baiae. Here he took shipping for Capreae. As his galley shot across the Puteolan bay, it was met by a trading-vessel from Alexandria in Egypt, the crew of which, aware of the monarch's approach, had dressed themselves in white, and crowned their heads with chaplets; and, when he was still nearer to them, they burned incense before him, swearing to live for him, and for him to navigate the seas. These testimonials of affection—or this adulation—cheered for a moment the dying emperor. He distributed money among his followers, desiring them to spend it in purchasing the Alexandrian merchandise. At Capri, Augustus, determining to forget the cares of government, gave up his whole soul to ease and affable intercourse; but this secession from toil, and the enjoyment of the tranquillity and the balmy atmosphere of the place, and the magical scenery around him, could not restore the old and worn-out man, who died shortly after at the town of Nola in Campania, and almost within sight of the island.

Capri is, however, much more memorable as being the constant retreat for several years of Augustus's successor, the execrable Tiberius. For the honor of human nature, it is to be hoped that those who have described the life and impurities of this systematic tyrant and debauchee, have in some instances sacrificed truth to eloquence and effect: but still enough will remain to excite our abhorrence, and our regret that his name should be associated with so beautiful a spot of earth. Shut up with the infamous ministers of his tyranny and lust in this rocky, inaccessible island, Tiberius ruled the vast Roman empire. It was here he committed or ordered some of the most atrocious of his cruelties; it was here he wrote the "verbose and grand epistle" to the senate at Rome, immortalized in its infamy by Juvenal; it was here the arbiter of the fate of millions trembled in his old age at what might be his own destiny, and sat on "the august rock of Caprea with a Chaldean band"—a band of astrologers and impostors—to consult the stars. He here built twelve palaces or villas, which were all strongly fortified, and erected many other works, the ruins of which still bear his name. The poor islanders of the present day, indeed, at-

tribute every ancient building or fragment found on the island to "Tiberio Cesare," whom they amusingly call "emperor of Capri, and king of Rome." It is also very amusing to hear how they talk traditionally of the tyrant, and of the deeds and vices recorded by Tacitus, Suetonius, and Juvenal.

The sail from Naples to Capri on a fine summer evening, when favored by the *vento di terra*, or land breeze from the main, is one of the most delightful that can be imagined. The only accessible point in the island is called the *Sbarco di Capri*, or the landing-place. This is below the town of Capri, to which there is an ascent by means of a rude Cyclopean flight of steps, steep and rugged in the extreme. A few fortifications might render the island altogether inaccessible to an enemy, and entitle Capri to the name that was commonly given to it during the last war of Napoleon, viz., the Little Gibraltar. During a certain part of that long struggle, when the French arms had driven the king of the Two Sicilies from Naples to Sicily, the English held the island for that sovereign. They kept possession of it during the whole of the short reign at Naples of Joseph Bonaparte; but when he went to Spain, and Murat replaced him in Italy, it was attacked with an imposing force, and, being most absurdly defended, it fell into the hands of the French.

The principal town, or, as it is pompously called, the "metropolis of Capri," stands on a shelving rock toward the east of the island. It consists of a group of some two or three hundred small but tolerably neat houses, five or six churches and chapels, with a confined piazza, or square, in the midst. It is surrounded by vineyards and orchards, and some small olive-groves stand on ledges of the cliffs above it. There is only one more town in the island. This is called Anacapri, and is situated high up, on a narrow ledge of the western mass of rock that goes by the same name. The fishermen, sailors, and traders, live in the chief town, and the lower parts of the island and Anacapri are almost solely inhabited by frugal, industrious peasants. It is one of the cleanest places that eye can behold. Its inhabitants communicate with the other town and

all the east of the island by means of a flight of five hundred and thirty-eight steps, which zigzags in a curious manner down the face of a precipice. On a still loftier precipice, in the rear of the town of Anacapri, are the picturesque ruins of a castle of the middle ages.

The villages—if groups of three or four vine-dressers' houses may be so called—are nestled here and there in little hollows, or are perched on steps in the cliffs, chiefly on the eastern half of the island. Wherever it has been possible to make them grow, they are surrounded by trees and vineyards. The persevering industry of the islanders is very admirable. By hewing out rocks here—by piling them up to form terraces and retain the scanty soil there—by removing the earth from places where it was exposed to be washed away, and depositing it in well-defended, secure places—they have covered considerable patches of the northern front of Capri with beauty and fertility. The back of the island is so precipitous, that it is altogether impracticable. The cultivable parts produce most kinds of vegetables and fruits, a small quantity of excellent oil, and wine in abundance. The wine, which is well known to all who have resided at Naples, is of two sorts—*Capri rosso* and *Capri bianco*—or red and white Capri. The quality of both is very good, being devoid of that volcanic, sulphurous flavor common to most of the wines produced near Naples.

Quails form another important article of export. These birds of passage, which come in countless flights from the coast of Africa in spring, and return thitherward in autumn, are caught on the island in large nets spread out in hollows on the tops of the rocks, through which, season after season, the quails are sure to pass. In some years, as many as one hundred thousand of these delicate birds, without counting those consumed at home, have been sent to the Neapolitan market. Capri, which is now united to the see of Sorrento, once had a bishop of its own; and, in former days, that dignitary's revenue was derived almost entirely from the trade in quails.

In 1826, the whole population of the island amounted to about four thousand

souls. There were two or three schools established by government. The people seemed very healthy, contented, and cheerful—free and equal in their intercourse with one another—and, like most islanders, much attached to the place of their birth. None of them could be called rich, even according to the low scale of that part of the world, but then very few were abjectly poor. Like the inhabitants of the contiguous peninsula, the Sorrentini, the Amalfitani, &c., the people of Capri invariably leave an agreeable recollection in the mind of the traveller.

The bold, perpendicular cliff at the eastern extremity of the island, which is correctly represented in our engraving, is the too-celebrated *Salto Capreatum*, over which, if history speaks truly, Tiberius was accustomed to have his tortured victims driven. The cliff still retains its name, Italianized, the islanders always calling it "*Il Salto*," or the leap. It rises seven hundred feet above the level of the sea. Not far from the brow of this cliff are very considerable remains of the Villa Jovis, one of the tyrant's twelve mansions, which all stood on this half of the island. The guides assure the stranger that some arched subterranean chambers, communicating with one another, that are found here, were the *torturing dungeons* of Tiberius. A fine mosaic pavement, some columns of *giallo antico*, a Greek statue of a nymph, with many cameos and intaglios, were found at the Villa Jovis many years since. Indeed, this small island and these Tiberian villas, of which we need not give a minute description, as little remains of them but sub-structures and dismal cells, have contributed largely to modern museums, churches, and palaces. The four magnificent columns of *giallo antico*—and all of one piece—that now decorate the chapel of the king of Naples in the palace of Caserta were dug up in one of the villas. A splendid mosaic, which Murat's wife, Caroline Bonaparte, caused to be removed and laid down as a flooring to her own boudoir in the palace at Portici, was found in another; and each of the villas, from amid their crumbling ruins, have furnished rosso, giallo, and verde antico, lapis lazuli, other beautiful stones, and a peculiar sort of marble called Tiberian, in

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Caverna Axurra. In the Island of Capri.



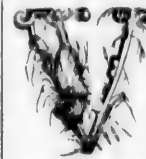
wonderful profusion. Statues and busts in marble and bronze, and of exquisite workmanship, medals and bassi-relievi, and other objects of art, have also been found and carried away in great quantities during the course of centuries. The mosaics and Corinthian capitals of the Tiberian villas are especially considered as models of perfection of their kind. All these twelve magnificent villas were included in a space, the circumference of which does not exceed four miles. The wealth of the emperor was employed for years in erecting and adorning them.

The very curious cavern represented in the engraving was recently and accidentally discovered. The water in the cavern and the stalactites on its roof are represented as being tinged with the most exquisite blue. Hence its Italian name of "Caverna, or Grotta Azzurra," or "Caverna Blu"—the Blue Cavern.

A low-pitched and narrow aperture in the rocks west of the usual landing-place at Capri, and about one and a half miles distant from it, leads into an immense circular cavern, recently discovered—well worth notice, and distinguished by the name of "La Grotta Azzurra." Persons who visit this sapphire cell are obliged to place themselves horizontally in the little bark destined to convey them through the above low and narrow aperture, which is so small as to excite an alarm of finding darkness within; but, on the contrary, if the day be cloudless, all is light—light that would dazzle, were it not blue. The color of the water which fills the cavern precisely resembles that of the large bottles of vitriol, with lamps behind them, seen at chymists' windows; and this water appears to act like the lens of a telescope, by conducting the rays of the sun and the reflection of the brilliant skies of Magna Græcia into the cavern. After the eye has been for a few moments accustomed to a light so magical, the stupendous vaults of this gigantic bath are discernible, richly studded with stalactites, and assuming, in consequence of a strong reflection, from the transparent blue water, exactly the same tint. The cavern contains broken steps leading to a subterranean passage, the length of which is unknown, it being impossible to reach the

end, owing to an impediment formed by earth and stones. Masonry seems to have been employed in the construction of the steps and passage, which probably communicated either with one of Tiberius's villas or that of Julia, the niece of Augustus; but the cavern, although it may have been used as a bathing-place, is evidently the work of nature.

DISCIPLINE OF THE EYES.



VISION is one of the most important and the most comprehensive of the senses, yet it is one that can not be exercised in its full efficiency without considerable practice and self-tuition. This

fact, well known in theory, was first elucidated by experiment in the case of the boy who was cured of blindness at the age of fourteen. A case of equal interest occurred lately in London, a report of which by Dr. Franz is given in the Philosophical Transactions. The leading results in both cases exactly coincide.

If a person totally blind from birth were, at a mature age, and in possession of all his other faculties, at once to obtain the full use of his eyes, one would be apt to imagine that he would perceive objects around him just as other grown-up persons usually do. This, however, is by no means the case. There is none of the senses so deceptive, taken by itself, as that of vision. No just idea can be formed of any object by the eye alone; and it is only by the aid and experience of the other senses, as well as by repeated practice in vision, that an accurate notion of even the simplest object can be obtained. To the inexperienced eye all objects are flat, or seem only as surfaces. All objects, too, however near or distant, appear as if in one plane; so that form, size, distance, are all indistinguishable. Even color depends upon proximity to the eye, for the brightest objects at a remote distance appear dim and almost colorless.

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The case operated upon by Dr. Franz was that of a young gentleman of seven-
teen years of age, the son of a physician.
He had been blind from birth. His right
eye was quite insensible to light, and in
that state called *amaurotic*. His left eye
contained an opaque lens, or cataract: with
it he could distinguish a strong light, and
even vivid colors, but he had no idea of the
forms of objects. It was on this left eye
that the operation was performed, and for-
tunately it proved successful. As the
young man possessed an intelligent mind,
and had been carefully educated as far as
his condition would allow, the opportunity
was a favorable one to test the accuracy
of former experiments.

"On opening the eye," says Dr. Franz,
"for the first time on the third day after
the operation, I asked the patient what he
could see. He answered that he saw an
extensive field of light, in which every-
thing appeared dull, confused, and in mo-
tion. He could not distinguish objects,
and the pain produced by the light forced
him to close the eye immediately." Two
days afterward the eye was again exposed.
"He now described what he saw as a
number of opaque watery spheres, which
moved with the movements of the eye;
but when the eye was at rest, remained
stationary, and then partially covered each
other. Two days after this the eye was
again opened: the same phenomena were
again observed, but the spheres were less
opaque, and somewhat transparent—their
movements more steady, and they appeared
to cover each other more than before. He
was now for the first time capable, as he
said, to look through the spheres, and to
perceive a difference, but merely a differ-
ence, in the surrounding objects. When
he directed his eye steadily toward an ob-
ject, the visual impression was painful and
imperfect, and the intolerance of light
obliged him to desist. The appearance
of spheres diminished daily; they became
smaller, clearer, and more pellucid, and
after two weeks disappeared. Dark brown
spots (*muscae volitantes*) floated before the
eye every time it was opened; and when
shut, especially toward evening, dark blue,
violet, and red colors, appeared in an up-
ward and outward direction."

As soon as the state of the patient per-

mitted, the following experiments on his
sense of vision were instituted. They
were performed in succession, and on dif-
ferent days, so as not to fatigue the eye
too much. In the first experiment, silk
ribands of different colors, fastened on a
black ground, were employed to show,
first the primitive, and then the comple-
mentary colors. The patient recognised
the different colors, with the exception of
yellow and green, which he frequently
confounded, but could distinguish when
both were exhibited at the same time.
Gray pleased him best, because this color,
he said, produced an agreeable and grato-
ful sensation. The effect of red, orange,
and yellow, was painful, but not disagree-
able; that of violet and brown not painful,
but very disagreeable; the latter he called
ugly. Black produced subjectioned col-
ors, and white occasioned the recurrence
of *muscae volitantes* in a vehement degree.

In the second experiment, the patient
sat with his back to the light, and kept
his eye closed. A sheet of paper, on
which two long black lines had been
drawn—the one horizontal, the other ver-
tical—was placed before him at the dis-
tance of about three feet. He was now
allowed to open the eye, and, after atten-
tive examination, he called the lines by
their right denominations. When he was
asked to point out with his finger the hori-
zontal line, he moved his hand slowly, as
if feeling, and pointed to the vertical line;
but after a short time, observing his error,
he corrected himself: the outline in black,
of a square six inches in diameter, within
which a circle had been drawn, and within
the latter a triangle, was, after careful ex-
amination, recognised and correctly de-
scribed by him. When he was asked to
point out either of the figures, he never
moved his hand directly and decidedly,
but always as if feeling, and with the
greatest caution: he pointed them out,
however, correctly. A line consisting of
angles, or a zigzag and a spiral line, both
drawn on a sheet of paper, he observed to
be different, but could not describe them
otherwise than by imitating their forms
with his finger in the air. He said he
had no idea of these figures.

In a third experiment, light being ad-
mitted into the room at one window only,

to which the patient's back was turned, a solid cube and a sphere, each four inches in diameter, were placed before and on a level with the eye at the distance of three feet. Allowing him to move the head in a lateral direction no more than was necessary to compensate the point of view of the right eye, which was visionless, he was now desired to open his eye, and say what the objects were. After attentively examining them, he said he saw a quadrangular and a circular figure, and after some consideration he pronounced the one a square and the other a disk. His eye being again closed, the cube was taken away, and a flat disk of equal size placed next to the sphere. On opening his eye, he observed no difference in these objects, but regarded them both as disks. The solid cube was now placed in a somewhat oblique position before his eye, and close beside it a figure cut out of pasteboard, representing a plain outline prospect of the cube when in this position: both objects he took to be something like flat quadrates. A pyramid placed before him with one of its sides toward his eye, he saw as a plain triangle. This object was now turned a little, so as to present two of its sides to view, but rather more of one side than of another. After considering it for a long time, he said that this was a very extraordinary figure: it was neither a triangle, nor a quadrangle, nor a circle. He had no idea of it, and could not describe it. When subsequently the three solid bodies, the sphere, the cube, and the triangle, were placed in his hands, he was much surprised that he had not recognised them as such by sight, as he was well acquainted with these solid mathematical figures by touch.

There was another peculiarity in his impressions: when he first began to look at objects, they all appeared to him so near, that he was sometimes afraid of coming in contact with them, though many were in reality at a great distance. He saw everything much larger than he had supposed, from the idea obtained by his sense of touch. All moving, and especially living objects, such as men and horses, appeared to him very large. If he wished to form an estimate of the distance of objects from his own person, or of two ob-

jects from each other, without moving from his place, he examined the objects from different points of view, by turning his head to the right and to the left. Of perspective in pictures, he had, of course, no idea. He could distinguish the individual objects in a painting, but could not understand the meaning of the whole picture. It appeared to him unnatural, for instance, that the figure of a man represented in the front of the picture should be larger than a house or a mountain in the background. Every surface appeared to him perfectly flat. Thus, though he knew very well by his touch that the nose was prominent, and the eyes sunk deeper in the head, he saw the human face only as a plane. Though he possessed an excellent memory, this faculty was at first quite deficient as regarded vision: he was not able, for example, to recognise visitors unless he heard them speak, till he had seen them very frequently. Even when he had seen an object repeatedly, he could form no idea of its visible qualities in his imagination, without having the real objects before him. Formerly, when he had dreamt of persons—of his parents, for instance—he felt them, and heard their voices, but never saw them; but now, after having seen them frequently, he saw them also in his dreams.

The human face pleased him more than any other object presented to his view. The eyes he thought most beautiful, especially when in motion; the nose disagreeable, on account of its form and great prominence; the movement of the lower jaw in eating he considered very ugly. Although the newly-acquired sense afforded him many pleasures, the great number of strange and extraordinary sights was often disagreeable and wearisome to him. He said that he saw too much novelty, which he could not comprehend; and even though he could see both near and remote objects very well, he would nevertheless continually have recourse to the use of the sense of touch.

Such are the nature of our impressions in early infancy, before vision becomes to us a true exposition of the forms and relative positions of objects. And such is the effect of habit and association, that the actual deceptions which the sense of

sight, when taken alone, is continually presenting to us, can only be appreciated or detected by the philosophic inquirer.

HOW TO GET RICH.



ALMOST every merchant has at some point of his life been rich, or at least prosperous; and if he is poor now, he can see very well how he might almost certainly have avoided the disasters which overthrew his hopes. He will probably see that his misfortunes arose from neglecting some of the following rules:—

Be industrious. Everybody knows that industry is a fundamental virtue in the man of business. But it is not every sort of industry which tends to wealth. Many men work hard to do a great deal of business, and after all make less money than they would if they did less. Industry should be expended in seeing to all the details of business: in carefully finishing up each separate undertaking, and in the maintenance of such a system as will keep everything under control.

Be economical. This rule also is familiar to every one. Economy is a virtue to be practised every hour in a great city. It is to be practised in pence as much as in dollars. A shilling a day saved, amounts to an estate in the course of a life. Economy is especially important in the outset of life, until the foundations of an estate are laid. Many men are poor all their days, because when their necessary expenses were light, they did not seize the opportunity to save a small capital, which would have changed their fortunes for the whole of their lives.

Stick to your own business. Let speculators make their thousands in a year or a day—mind your own regular trade, never turning from it to the right hand or to the left. If you are a merchant, a professional man, or a mechanic, never buy lots

or stocks unless you have surplus money which you wish to invest. Your own business you understand as well as other men; but other people's business you do not understand. Let your business be some one which is useful to the community. All such occupations possess the elements of profit in themselves, while mere speculation has no such element.

Never take great hazards. Such hazards are seldom well balanced by the prospects of profit; and if they were, the habit of mind which is induced is unfavorable, and generally the result is bad. To keep what you have, should be the first rule; to get what you can fairly, the second.

Don't be in a hurry to get rich. Gradual gains are the only natural gains, and they who are in haste to be rich, break over sound rules, fall into temptation and distress of various sorts, and generally fail of their objects. There is no use in getting rich suddenly. The man who keeps his business under control, and saves something from year to year, is always rich. At any rate, he possesses the highest enjoyment which riches are able to afford.

Never do business for the sake of doing it and being accounted a great merchant. There is often more money to be made by a small business than a large one; and that business will in the end be most respectable which is most successful. Do not get deeply in debt; but so manage as always, if possible, to have your financial position easy, so that you can turn any way you please.

Do not love money extravagantly. We speak here merely with reference to being rich. In morals, the inordinate love of money is one of the most degrading vices. But the extravagant desire of accumulation induces an eagerness, many times, which is imprudent, and so misses its object from too much haste to grasp it.

INSANITY.—In Italy there is one insane man to 4,879; in France, one to 1,000; Wales, one to 800; England, one to 862; Scotland, one to 574; Russia, one to 666; United States, one to 500. Among the Chinese, insanity is almost unknown.



Shaddock Tree.

THE SHADDOCK-TREE.



THE shaddock (*Citrus decumana*) is one of the four distinct or leading species into which the orange-tribe of plants is divided. The shaddock is larger than the orange, both in the tree and the fruit. The tree has spreading, prickly branches: the leaves are egg-shaped and rather acute, and the leaf-stalks are furnished with remarkably large heart-shaped wings: the flowers are white, with reflexed petals, and very sweet-scented. The fruit, which is from two and a half to eight inches in diameter, is spheroidal, of a greenish yellow color, and has twelve or more cells, containing, according to the variety, either a red or white pulp. The juice is sweet in some varieties, and acid in others; it is rather insipid, but is excellent for quenching thirst. The rind, which is of a disagreeable bitter flavor, is very thick, in consequence of which the fruit can be much longer preserved during sea-voyages than that of any other species of citrus.

The shaddock is a native of China and the neighboring countries, where the name of "sweet-ball" is given to it. Its common name is derived from Captain Shaddock, who brought it from China to the West Indies. It has, however, been neglected there, and is now but seldom entitled to its oriental name of sweet-ball. Instead of propagating the shaddock by budding, as is done in China, and which is the only way it can be improved, or even kept from degenerating, they have reared it from seed, and have in consequence only obtained a harsh and sour sort of little value. The shaddock came to England from the West Indies, and was cultivated by Miller in 1739. In the West it is certainly the least valuable of the genus to which it belongs; and for the attention which it has received it is chiefly indebted to the showiness both of the tree and the fruit. In its native country the fruit attains a much greater size than in the West. Thunberg says that it is commonly of the size of a child's head in Japan; Dr. Sickler de-

scribes it as weighing fourteen pounds, and as having a diameter of from seven to eight inches. Their accounts are confirmed by Bishop Heber, who thus describes the shaddock of India: "The shaddock resembles a melon externally, but it is in fact a vast orange, with a rind of two inches thick, the pulp much less juicy than a common orange, and with rather a bitter flavor—certainly a fruit which would be little valued in England, but which in this burning weather I thought rather pleasant and refreshing." The shaddock is sometimes sold under the name of "forbidden fruit."

PHOSPHORUS.



PHOSPHORUS, an elementary non-metallic substance, was accidentally discovered by BRANDT, an alchemist of Hamburgh, while he was attempting to discover, in human urine, a substance capable of converting silver into gold; it was afterward discovered by Kimmel, who knew that Brandt had prepared it from urine, but he knew not Brandt's method of preparation; afterward it was discovered by Boyle, an English chymist.

Under the name of English phosphorus, it was, for some years, supplied to all Europe, by Godfrey Hawkitz, the assistant of Boyle.

Phosphorus was prepared from urine, by the action of acetate or nitrate of lead, which is decomposed, and a phosphate of lead precipitated: this being well washed, dried, and distilled in a stone-ware retort, yields phosphorus. In the year 1796, Gahn discovered that it was contained in bones, in union with lime; Scheele soon after contrived the following process by which it is now obtained from this source.

The bones are calcined (to destroy the animal matter) till they become white, in which state they contain phosphate of lime, with a little carbonate of lime; this substance is then decomposed by about

two thirds of its weight of sulphuric acid ; to this is added water, and the insoluble sulphate of lime precipitates, and is separated by filtration from the superphosphate of lime in solution : this liquid is then evaporated to the consistency of sirup, when it is intimately mixed with powdered charcoal, to form a thick paste ; it is then well rubbed in a mortar, and having been dried in an iron vessel, it is introduced into an earthenware retort, the beak of which is immersed in water ; the heat is gradually raised till the retort be heated to whiteness. During this process, gaseous bubbles issue from the beak of the retort, some of which rise to the surface of the water and take fire ; at last a substance, having the appearance of melted wax, drops from the beak of the retort, and congeals in the water : this is *phosphorus*, the formation of which depends on the union of carbon with oxygen at a high temperature ; these two gases unite, and form carbonic oxyde, consequently the phosphorus is all along accompanied with that gas.

Wöhler has recommended the use of ivory black, which is a mixture of phosphate of lime and charcoal (carbon). His method was to calcine the ivory black with fine quartz sand and a little ordinary charcoal, at a high temperature ; to the cylinder containing the materials, a bent tube of copper was fixed, one end of which descended into a vessel of water.

At the ordinary temperature, phosphorus is a soft substance, of a light amber color, and perhaps white, if absolutely pure ; when cut with a knife, it appears like wax : by the action of light it assumes a red tint. It undergoes oxydation in the open air, and white vapors of an unpleasant and suffocating odor arise from it. In the dark, they are luminous, and attended with a sensible degree of heat ; during their exhalation, the phosphorus is covered with small drops of *phosphorous acid*, produced by attracting oxygen from the atmosphere ; it may, in consequence of its low degree of combustion, undergo spontaneous fusion ; it is necessary to be cautious in handling phosphorus, as a burn from it is exceedingly severe. Although phosphorus is so readily oxydised in the atmosphere, it may be kept from combustion even at a temperature of 200° (Gra-

ham), by the presence of certain gases, such as olefiant gas, vapors of naphtha, of sulphuric ether, and oil of turpentine. In pure oxygen gas it may be kept without undergoing oxydation.

Phosphorus affords some of the most brilliant experiments :—

Experiment 1. Rub together in a mortar ten grains of chlorate of potash, and one grain of phosphorus : violent detonations will result.

2. Put together, in a glass, a little chlorate of potash and phosphorus ; pour gently on them, so as not to displace the materials, a little water ; and, by means of a drop-tube, let fall immediately on them a little strong sulphuric acid : combustion under water will result.

3. To the ingredients of the last experiment add a small piece of zink, then pour on the sulphuric acid.

4. To the same materials add a small piece of phosphoretted lime : and combination, both on the surface and in the water, will result.

5. Take the quantity of chlorate of potash and phosphorus named in experiment 1 ; mix them intimately and carefully together on a piece of paper by means of a knife ; throw the mixture into a little strong sulphuric acid : the contact of these cold substances will produce detonation and flame.

6. Into a retort put a little water and potash ; boil the mixture, and drop in a piece of phosphorus ; plunge the mouth of the retort under water : *phosphoretted hydrogen gas* will rise to the surface of the water, and immediately take fire.

Phosphorus is soluble in oil and ether ; the solution in oil may with impunity be rubbed on any part of the body. If the solution in ether, in small portions, be poured on hot water, a beautiful light will result. This experiment should be performed in a dark room.

Phosphorus unites with the alkalies and earths ; perhaps it is most readily united with lime.

In a glass tube, sealed at one end, put some pieces of phosphorus, and over these some recently-made quicklime in small pieces ; put a piece of paper loosely into the mouth of the tube ; put a coating of clay over that part of the tube which con-

tains the lime, and expose it to heat in a chaffing-dish of charcoal; then apply heat to the phosphorus, and the vapors will unite with the heated lime, and form phosphoret of lime. If *carbonate of lime* be used instead of *quicklime*, the carbonic acid will be decomposed by the phosphorus, which will unite with the oxygen and form phosphoric acid; this unites with the lime, and forms phosphate of lime. The carbon is deposited as charcoal.

The following brilliant experiment is by Davy:—

Into an ale-glass put one part of phosphoret of lime, in pieces about the size of a pea (not in powder), and add to it a half part of hyper-oxygenized (from *vapour*, over) muriate of potash. Fill the glass with water, and put into it a funnel, with a long pipe, or narrow glass tube, reaching the bottom. Through this pour three or four parts of strong sulphuric acid, which will decompose the hyper-oxygenized salt, and the phosphoret also decomposing the water at the same time, flashes of fire dart from the surface of the fluid, and the bottom of the vessel is illuminated by a beautiful green light.

Phosphorus unites with oxygen in four proportions: namely, oxide of phosphorus ($2P + O$), two equivalents of phosphorus and one of oxygen; hypophosphorous acid not insoluble ($P + O$), one equivalent of phosphorus and one of oxygen; phosphorous acid ($P + 3O$), one equivalent of phosphorus and three of oxygen; and phosphoric acid ($P + 5O$), one equivalent of phosphorus and five of oxygen. The last is a powerful acid.

The oxide of phosphorus is obtained by burning phosphorus in the air or in oxygen gas (when it affords a brilliant light).

It is a yellow powder, not soluble in water or alcohol.

Phosphorous acid may be obtained by exposing to the atmosphere a stick of phosphorus in a bent tube, one end of which terminates in an empty glass bottle; after a time, the phosphorus will have disappeared, and a liquid will be found in the bottle: this is *phosphorous acid*. If several sticks of phosphorus be exposed to the atmosphere at the same time, they must be kept separate by putting each into

a small glass tube, rather larger than the stick of phosphorus.

Pure phosphoric acid may be obtained by adding gradually to nitric acid heated on a matrass, a few pieces of phosphorus; the nitric acid is decomposed, and the phosphorus unites with it and forms *phosphoric acid*.

If any nitric acid remain undecomposed, it may be separated by distillation in a retort, when a dry mass of phosphoric acid will remain; if pure, it will readily dissolve in water.

Phosphorous acid unites with the alkalis and earths, and forms the class called *phosphites*.

Phosphoric acid unites with the alkalis and earths, and forms the class called *phosphates*. The most important, and the only one used in medicine, is phosphate of soda.

Phosphorus is exceedingly poisonous, even when taken in small quantities, as in the stomach it undergoes combustion. In the treatment of a case, the stomach is usually filled with liquid, having magnesia in solution, which neutralizes the phosphoric acid formed, and vomiting results.

GIBRALTAR.



ESIDES its admirable advantages as a place of strength, this promontory may be said, owing to the narrowness of the strait upon which it juts out, to command, not only the corner of Andalusia immediately under it, but the whole of the western coast of Spain, comprising nearly two thirds of the whole maritime circumference of that country. It effectually cuts off all communication by sea between that part of Spain which is bounded by the Mediterranean and those parts which are bounded by the Atlantic.

It appears, however, to have been late before the importance of this rock was discovered. The ancients had a fable that Europe and Africa were originally joined



The Rock of Gibraltar.

at this point, and that the two continents were riven asunder by Hercules, and a passage thereby opened between the Atlantic and the Mediterranean. Gibraltar, under the name of Calpe, and Mount Abyla opposite to it on the African coast, were called the Pillars of Hercules, and appear to have been in very early ages regarded by the people dwelling to the east of them, including the Carthaginians, the Greeks, and the Romans, as the western boundary of the world. It was probably long before navigation penetrated beyond this limit. Even in after-times, however, when Spain became well known to the Romans and a province of their empire, we do not read of any fort being erected on the rock of Calpe. It is doubtful if it was even the site of a town. No Roman antiquities have ever been found on the spot or in the neighborhood.

The place appears to have been first seized upon and converted into a military station by the Moors when they invaded Spain in the beginning of the eighth century. From their leader, Tarif, it was in consequence called Gibel-Tarif, or the Mountain of Tarif, of which Arabic name Gibraltar is a corruption. Soon after establishing themselves here, the Moors erected a lofty and extensive castle on the northwest side of the mountain, the ruins of which still remain. Gibraltar continued in the possession of the Moors for between seven and eight centuries, with the exception of about thirty years, during which it was held by the Christians, having been taken soon after the commencement of the fourteenth century by Ferdinand, king of Castile. It was recovered, however, in 1333, by Abomelek, the son of the emperor of Fez, and the Moors were not finally dispossessed of it till the middle of the following century. After that it remained a part of the kingdom of Spain down nearly to our own times.

The promontory of Gibraltar forms the southwestern extremity of the province of Andalusia, running out into the sea in nearly a due south direction for about three miles. The greater part of this tongue consists of a very lofty rock. It rises abruptly from the land to the height of fully thirteen hundred feet, presenting

a face almost perfectly perpendicular, and being consequently from that, its northern extremity, completely inaccessible. The west side, however, and the southern extremity, consist each of a series of precipices or declivities which admit of being ascended. The town, now containing a population of above seventeen thousand persons, is built on the west side. Along the summit of the mountain, from north to south, runs a bristling ridge of rocks, forming a ragged and undulating line against the sky when viewed from the east or west. The whole of the western breast of the promontory is nearly covered with fortifications. Anciently, it is said, it used to be well wooded in many places; but there are now very few trees to be seen, although a good many gardens are scattered up and down both in the town and among the fortifications. A great part of the rock is hollowed out into caverns, some of which are of magnificent dimensions, especially one called St. George's Cave, at the southern point, which, although having only an opening of five feet, expands into an apartment of two hundred feet in length by ninety in breadth, from the lofty roof of which descend numerous stalactical pillars, giving it the appearance of a Gothic cathedral. These caves seem to have been the chief thing for which Gibraltar was remarkable among the ancients. They are mentioned by the Roman geographer, Pomponius Mela, who wrote about the middle of the first century of our era. The southern termination of the rock of Gibraltar is called Europa Point, and has been sometimes spoken of as the termination in that direction of the European continent; but Tarifa Point, to the west of Gibraltar, is fully five miles farther south.

It is impossible for us here to attempt any description of the fortifications which now cover so great a part of this celebrated promontory. Gibraltar was first fortified in the modern style by the German engineer, Daniel Speckel, at the command of the emperor Charles V., toward the close of the sixteenth century. But little of what was then erected probably now remains. Since the place fell into the possession of the English, no expense has been spared to turn its natural advantages to the best



Interior of the Rock of Gibraltar.

account, and additions have repeatedly been made to the old fortifications on the most extensive scale. It is now, without doubt, the most complete fortress in the world.

More than half a century ago Gibraltar was accounted by military men almost impregnable. "No power whatever," says Colonel James in his "History of the Herculean Straits," published in 1771, "can take that place, unless a plague, pestilence, or famine, or the want of ordnance, musketry, and ammunition, or some unforeseen stroke of Providence, should happen." It is certainly now much stronger than it was then. One improvement which has especially added to its security is the formation of numerous covered galleries excavated in the rock, with embrasures for firing down upon both the isthmus and the bay. The interior of part of these works is represented in the engraving.

Gibraltar was taken by an English fleet, under the command of Sir George Rooke and the prince of Hesse Darmstadt, in July, 1704. The project of the attack was very suddenly formed at a council-of-war held on board the admiral's ship, while the fleet was cruising in the Mediterranean, and it was apprehended that it would be obliged to return to England without having performed any exploit commensurate to the expectations with which it had been fitted out. The affair proved a very easy one: the garrison, which consisted of one hundred and fifty men, having surrendered after a bombardment of only a few hours. The assailants lost only sixty lives, the greater part by a mine which was sprung after they had effected a landing. In the latter part of the same year a most resolute effort was made to recover the place by the combined forces of France and Spain, which failed after it had been persevered in for several months, and had cost the besiegers not less than ten thousand men. The loss of the garrison was about four hundred.

At the peace of Utrecht, in 1713, the possession of Gibraltar was confirmed to England. In 1727, however, another attempt, on a formidable scale, was made by Spain to dislodge the foreigners. An army of twenty thousand men having encamped in the neighborhood, the attack

was commenced in February and continued till the 12th of May, when it was put an end to by the general peace. In this siege the garrison lost three hundred killed and wounded; but the loss of the besiegers was not less than three thousand. The guns in the fortifications, it is worthy of remark, proved so bad, that seventy cannons and thirty mortars burst in the course of the firing.

THE FALLACY OF PROVERBS.

That "Beggars must not be choosers."



NE may as well try to change the motion of the tides as to correct a sentiment which has passed into the familiarity of a proverb. But is there not an error in the

one we have set at the head of this paragraph?

To say that a beggar shall not be the chooser, is the same as to say that a man shall not ask for what he wants. It is denying to the beggar the first principle, the rudiment, the alphabet, of our doctrine of human equality. That a beggar shall not choose? Who shall, then? Who knows what the beggar wants? Who can step into his shoes? Or who would wish to, if he could?

Indeed, it is putting a man on a pretty small allowance, to say that he may beg, but shall not beg for the supply of his wants. Every man who begs is presumed to be a judge of his own feelings; and if he asks the benevolent man for somewhat to appease his hunger, it is but insulting his calamity to offer him a draught to quench his thirst. And then, be it remembered, the beggar has feelings as well as the man who fares sumptuously every day—feelings, too, which are as sacred; and it is a poor compliment to his discernment to tell him that he does not know whether he is hungry or thirsty.

We need no revelation to assure us that when a man asks for bread, it is not suffi-

Interior of the Rock of Gibraltar.

cient to give him a stone; and it is anything but humanity to offer him a serpent, when he asks for a fish. If we give a man something different from what he asks for, we do not give it to him as a *beggar*, but because we, by a very strange presumption, claim to know his wants better than himself. We err in this thing. The beggar is and must be the chooser. He knows his wants, and we know our means of giving. We are both the high contracting parties; and if in the negotiation we do not like his terms, we can tell him, in so many words, that *we do not entertain his proposition with favor*. But we have no right to go a step further.

Salesmen sometimes tell their customers, "We know exactly what you want, and we have something which will suit." Gentlemen, you know no such thing; and you insult your customer, when you show him anything different from what he asks for. But the beggar is on different ground from either of us. He tells his story. His wants are many; and they are chiselled into his face like the lines and fissures of age upon granite. If we have wherewith to relieve him, let us do it. If we have not, let us "say so, and say no more."

St. Peter, we know, had not "silver and gold;" but he gave the beggar what was better. When we do as Peter did, then may we answer as Peter did.

If we can restore an eye to the blind, or an arm to the maimed, then we may refuse to the beggar a cup of water or a loaf of bread. But until we have the gift of healing, we do our duty by giving the beggar what he wants, or giving him nothing. And we do him wrong—we reduce him even below the humility incident to his condition, when we turn aside from his entreaties, by hinting to him that icy proverb—that "beggars should not be choosers."

That "*a rolling stone gathers no moss*." To be sure it doesn't, and very glad we are that it is so. Moss is a production of idleness. Machinery that is used gathers no rust. Bags, whose treasures are often counted, take no moth. If moss be a desirable commodity, this proverb is of value to the world. Let the wheels of the universe cease their motion, and the Babel-builders go to their rest, and future gener-

ations will have a harvest. The old gray pyramids must have a stock on hand by this time. For gathering moss, those gigantic pillars are excellent. But for every other purpose, the rolling stone is just the thing. And how easy it is to overthrow the pretensions of this old saw, by a thousand others of a contrary import! "The still bee gathers no honey."—"The still flint strikes out no spark."—"The still water is not pure." These are clinchers: there is no escaping from them; and if they do not put to flight the old heresy about "rolling stones," we are no judge. It is all fallacy. It is foolishness, and a lie. The Yankee contradicts the spirit of it in every line of his history. He is a living, constant proof of its folly. He begins "down East," and rolls along till he reaches the base of the Rocky mountains. And nobody questions his shrewdness: he understands himself and his fellows. If he can sell his wares, if his *notions* take with the people, he will stay where he is, and lay his bones with his fathers'. If not, his stakes are up at once, and to-morrow morning he is ready to start for Africa, to civilize the Mendians. In all this he works his card well, and "gathers no moss." He is your true "rolling stone." Moths eat not in his purse, for he keeps the silver rolling. Why should a man settle himself down upon the soil, as if he grew from the earth? Why be fastened on it, like barnacles to the keel of a vessel? He is not a part of the soil; and, while living, was not intended to be a fixture to it. The old proverb is bad in principle, and should never be suffered to creep into a man's political economy. The true policy on the subject is this: if you want the snow-ball to grow larger, *roll it over*.

FEBRUARY.

So named from *Februa*, *Februaca*, or *Februalis*, names of Juno. Our Saxon ancestors named it *Sprout-kele*: meaning, by kele, the kele-wurt, called by us cole-wurt, an herb in great use among our forefathers.

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The days are now sensibly lengthened; the cold generally begins to abate, and the sun has occasionally power enough gradually to melt away the snow and ice. Sometimes a sudden thaw comes on with a south wind and rain, which all at once dissolves the snow. Torrents of water then descend from the hills; every little brook and rill is swelled to a large stream; and the ice is swept away with great violence from the rivers.

THE BAY-TREE.



THE bay-tree (*Laurus nobilis*), or, as the French call it, Apollo's laurel, which our engraving represents amid the ruins of that country with the ancient literature and fables of which it is so closely connected, is a species of the rather extensive tribe of plants which botanists distinguish by the name of *Laurus* (the ancient Latin name of the bay-tree), and which, besides the present, includes several interesting species, such as the cinnamon, camphor, benzoin, &c., which we are not at present required to notice particularly. The geography of the laurel tribe is thus given by Dr. Lindley: "These trees inhabit the tropics of either hemisphere; in a very few instances only straggling to the northward in North America and Europe. No genus is known to exist in any part of the continent of Africa, except the paradoxical *Cassipoua*. This is the more remarkable, as several species of *Laurus* have been found both in Teneriffe and Madeira, and some other genera exist in Madagascar and in the isles of France and Bourbon." Of all the species, the English bay-tree seems the best qualified to struggle with a colder climate than the tribe can in general bear, and is, in fact, the only one that is indigenous in Europe. It is very common in the East, in the isles of Greece, and upon the coast of Barbary. Entire forests of bay-trees exist in the Canaries. It has been perfectly naturalized in Italy

and in the south of France; and it even bears the British climate very well, forming one of the most desirable evergreens of that country, although its growth is slow.

In its southern habitat the height of the bay-tree sometimes exceeds thirty feet. The leaves are of a rich deep green, highly and pleasantly aromatic; the flowers are of a pale-yellow color, and are afforded by old trees only; the fruit is of a nearly black-red color, and about the size of a small cherry—never, we believe, perfected in Britain, but plentiful in Italy. This is one of the trees which have been most celebrated by the ancient poets. Ovid relates, with great beauty, the fable of the change of Daphne into a laurel by Jupiter, to save her from the pursuit of Apollo, who thenceforth adopted the tree as his own:—

"Because thou canst not be
My mistress, I espouse thee for my tree;
Be thou the prize of honor and renown;
The deathless poet and the poem crown.
Thou shalt the Roman festivals adorn,
And, after poets, be by victors worn."

In consequence of this dedication to the god of poetry and music, the leaves of the plant were considered a suitable crown for the heads of poets, and came also to be bestowed on triumphant warriors, and on the victors in the Olympic games. Poets, warriors, and kings, continue still to receive the laurel crown in poetry, on statues, and on coins; and the court-poet still retains the title of laureate as a memento of the laurel crown he formerly wore. In the middle ages, it was customary to place on the heads of young doctors a crown of laurel; such persons, as well as the poets who were sometimes solemnly crowned, as in the case of Petrarch at Rome in 1341, seem to have been called *baccalaurei*, from which word some etymologists derive the word "bachelor," when used as a literary title of honor.

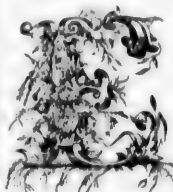
The bay-tree is useful in medicine; the leaves when bruised between the fingers exhale a pleasant odor, and afford when burnt a grateful incense. This aromatic property occasions the employment of the leaves for culinary purposes, and hence they are an article of export from the countries which afford the tree, being a branch of commerce even between Great Britain



Bay Tree.

and the United States. The husks of the berries contain a great quantity of volatile oil, which is very aromatic; and the kernels also furnish by expression a fat oil, which is much employed for embrocations. It is greenish in color, and the smell is a faint exhibition of that of bay-leaves.

CHINA AND THE CHINESE.



EVERYTHING relating to a nation which has books written an age before the birth of Christ must, of necessity, be interesting. It has been the general opinion that the Chinese are illiterate, and more like animals than humans. This opinion no doubt had its origin in estimates made of the character of the "outsiders," a race only half Chinese, being a mongrel of the former and the Tartar. They subsist partly upon what they steal from sailors, and partly upon rats, mice, dogs, and rice. Their habitations are floating junks, out of which they seldom go, as they can not land upon the coast or enter any of the cities without paying a sort of entrance-fee or toll. They are great legerdemainists, and their keen knowledge, as well as the constant practice of the mysteries of sleight-of-hand, enables them to swindle unwary "barbarians" with perfect impunity. They are very expert counterfeiters, and deal largely in spurious silver coin. Until within a few months no other class of the people of China have been visible to foreign eyes: hence, as we suppose, the unfavorable opinion which prevails with regard to the intellectual capacities of the Celestials. The Chinese are, as a nation, highly educated—versed in the arts, and, so far as literature goes, exceedingly well advanced in mental culture. In mechanical ingenuity they excel all others. For industry they are unparalleled, for the whole empire is like a beehive.

Cheap literature flourishes apace among this strange people. Books are numerous

and constantly published, as in Europe. The greater a celestial's learning, the higher his rank in the esteem of his fellows. In politics the Chinese are as wide awake as we are. The people have as much to say with regard to public men and measures as the most democratic conclave of Americans, and the government is obliged, in all instances, to succumb to the popular will. One fault has retarded the desirable progress of the Chinese, and that is epicurean indolence. Everything in the way of social intercourse is managed on a dreamy system of ease. In their epistolary conversation, the written salutation invariably is, "I wish you *tranquillity* and promotion." How a people who eat *soups* with chopsticks, can be tranquilly disposed, is a mystery.

The Chinese assert that their population is equal to three hundred and fifty millions. This will not seem at all unworthy of credence, when we reflect that China is as large as Europe, and that the water is inhabited (by means of the aforesaid junks) as densely as the land: there are thousands of the Chinese who are born, live, and die, on the water, and are quite worthy of the title of amphibii. A nation numbering so many souls *ought* to be powerful, but is not, simply because martial skill is not considered a necessary national accomplishment. If they were good warriors, they might not only defy the aggressions of foreign powers, but overrun and subdue the lands bordering on their own. Thus we see that the "Peace Society" would, if they could gain us over to the support of their doctrines, enervate us as a nation, and present us an easy prey to the ambitious designs of antagonistic governments.

The Chinese are brave; no men die more fearlessly on the field of battle: they are as impetuous as tigers, and as devoid of coolness and precision as a community of enraged cats. They are great newspaper readers, and newspapers circulate as freely in the principal cities as they do in Gotham. The "Pekin Gazette" is the principal newspaper, and penetrates to every part of the empire.

The names and emoluments of public officers are annually given in the "Red Book," a publication somewhat similar

to our "Blue Book," only ten times as large.

China, too, is a country which is abundant in its resources. She needs no foreign trade—her own territory produces everything that is requisite for their support. They trade with foreigners entirely against their wishes, and would avoid everything in the way of commerce with other nations if they could.

Another very remarkable fact connected with the customs of this curious nation is, that they have no beasts of burden. The country is so densely crowded, that they could not find pasturage. Besides, tenements are too numerous to admit of carriage-ways in the streets of cities. The streets are only narrow footpaths, scarcely adequate to the purposes of pedestrianism.

A great cause for Chinese congratulating Chinese is the fact that all the improvements in the arts upon which Europeans pride themselves, were known among the cultivators of "mild oolong" years before any other people had an inkling of them. Look at the sagacity of these people! They are ingenious to a fault: yet machinery, the use of which would throw thousands of that dense population out of employment, has never been put in operation. The government asserts that the adoption of the use of labor-saving machinery would create a revolution in the empire and overturn it. It is thought that the introduction of English and American manufactures will, at some future day, produce the same disastrous results.

It is somewhat singular that the Chinese are miserable musicians. Their instrumental music is a wretched noise made by the bamboo and a diminutive drum, and their vocal accomplishment consists of the emission of a few guttural whines, and a series of harsh cries, resembling, in some degree, the music of the North American Indians.

THE annual loss to Great Britain by shipwreck is 610 ships, 15,000 lives—2,000,000. sterling!

Gas (the German of "ghost") was first used for giving light in 1805, in Manchester, England, for lighting cotton-mills.

THE MANIS.



UITE extraordinary is the appearance presented by the animals of this genus (*Manis*); as remarkable, in fact, as that of the armadillo tribe—being covered on

every part, with the exception of the belly, with exceedingly strong, large, and horny scales. These, when the animals roll themselves up, furnish a suit of armor by which they are defended much more effectually than even the armadillo is against the assaults of their enemies. This armor is a compensating circumstance in their structure, giving them the security which, from their want of teeth, their inability to grasp with their feet, and their perfectly harmless nature, they would otherwise want. The external covering, together with the unusual length of the body and tail, gives to these creatures an appearance so much resembling that of the lizard, that they have been called "scaly lizards." These animals have, however, no proper alliance with the lizard tribe; yet, on a general view of the animal kingdom, they may be admitted to be a link in the chain of beings, which connects the proper quadrupeds with the reptile class.

With the exception of their scaly covering, the animals of this genus have much resemblance to the ant-eaters in their structure and general habits. Like them, they live by thrusting their long tongue into the nests of ants and other insects, and then suddenly retracting it into their mouths and swallowing their prey. They are natives of India and the Indian isles. Our engraving represents the two species of the genus which are distinguished as long-tailed and short-tailed.

The long-tailed or four-toed manis (*manis tetradactyla*) is known in India by the name of the phatagen. It is of a very long and slender form. The head is small and the snout narrow. The whole body, except beneath, is covered with broad but sharp-pointed scales, which are striated, or divided by small channels like those

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Long and Short Tailed Manis

of cockle-shells, throughout their whole length. The throat and belly are covered with hair. The tail is more than twice the length of the body, and tapers gradually to the tip. The legs are very short: each foot is furnished with four claws, of which those of the fore-feet are stronger than those of the hind. Both the tail and the legs are scaled in the same manner as the body. The color of this animal is of a uniform deep brown, with a cast of yellowish, and with a glossy polished surface. It grows to the average length of five feet, from the tip of the nose to the extremity of the tail.

The short-tailed or five-toed manis (*manis pentadactyla*) is generally called in India the pangolin; but in Bengal it is called, in the Sanscrit language, *vagracite*, or the thunderbolt-reptile, on account of the excessive hardness of its scales, which are said to be capable of even striking fire like a flint. This species differs from the former in being of a much thicker and shorter form. The tail in particular is very differently proportioned, not being so long as the body: it is very thick at the base, and thence tapering gradually, but terminating very obtusely. It has also five instead of four claws to each foot: of which those on the fore-feet are of great strength, excepting the exterior one, which is much smaller than the rest. This species is scaled in the same manner as the preceding, but the scales differ in shape, and are much larger and wider in proportion to the body and tail. In the larger specimens of this species of pangolin the scales are smooth; but in those that are smaller they are slightly striated about half way from the base. In some specimens a few bristles are found between the scales, but in others this is not observed. The parts without scales are covered with hair. The animal is of a very pale yellow-brown color, with a surface as glossy as in the preceding species.

It walks very slowly with its claws bent under its feet, and would be the prey of every ravenous beast, had it not the power of rolling itself up, and opposing to its adversary a formidable defence of erected scales. The natives despatch the animal with blows of a stick, sell the skin to Europeans, and eat the flesh.

THE LAST LOOK.



HERE are few in this world who have not lost some near and dear friend, linked to them either by the ties of blood, or by a pleasant companionship enshrined in their hearts, and hallowed and held sacred by a true and disinterested affection. The insatiable tomb has robbed almost every one whom it has spared, of some being on whom his eye rested with pleasure, who softened for him the asperities of life's rough pathway, and into whose bosom he poured his own heart's rich treasures—feelings, confidence, and love. They have seen them droop and die gradually, perhaps. They have seen the rose fade, the flesh waste, the muscles relax, and the eye grow lustreless, or beam with that unnatural light which is sometimes born of disease, and only tells of its progress. They have watched in grief and tears the shiftings of fever—the slow sinking away of life, the hours of agony, the days of quiet and apparent convalescence, the hopeless relapse, and the final triumph of death. They have paced the room where the poor body lay shrouded for the grave, and where Death almost seemed visibly present, casting a shadow upon every wall and object, and gazed on the rigid form, the marble aspect, the soulless, unspeaking features. They have felt, too, that deep oppression and heart-sickness which comes over every one upon such an occasion, where the grim tyrant seems to be watching and gloating over his victim, and the riot of decay is already beginning to be seen. All this has lacerated and crushed their hearts; but perhaps the bitterest pang of all came with the last look into the grave, when the coffin had been lowered, the loved object consigned to its long, dreamless rest, and the busy spade of the sexton was throwing back the senseless earth upon it, and hiding it for ever.

During sickness we have the object before us, wasted and sadly changed it may be, but still capable of communing with us, of appreciating our kindness, of return-

LAST LOOK.

HERE are few in this world who have not lost some near and dear friend, linked to them either by the ties of blood, or by a pleasant companionship enshrined in their hearts, and hallowed by true and disinterested affection. The tomb has robbed them of him, of whom his eye rested with fondness for him the asperity of the path, and into whose heart his own heart's rich confidence, and love. They droop and die gradually; they have seen the roses fade, the muscles relax, the lifeless, or beam with joy, which is sometimes only tells of its progress—watched in grief and fever—the slow sinking hours of agony, the apparent convalescence, and the final triumph have paced the room, lay shrouded for the death almost seemed a shadow upon every face, and gazed on the rigid aspect, the soulless, unresponsive. They have felt, too, the heart-sickness, every one upon such the grim tyrant seems gloating over his victory, decay is already begun. All this has lacerated our hearts; but perhaps all came with the last when the coffin had moved, the object consigned to rest, and the busy was throwing back the lid, and hiding it for

we have the object badly changed it may be of communing with our kindness, of return-

ing our love, and of throwing a few rays of sunlight over the cloud of our sorrow—faint, indeed, yet still enough to gild its gathering gloom. There is still the old smile running now and then over the features, and lighting them up with something of their former expression. The voice, too, though it is not what it once was, falls upon our ears, and we follow our friend with a sort of lingering hope, convinced of his doom, yet half looking for deliverance, down to the very banks of death's river. And even when that voice is hushed, and the last smile has faded, when the bolt of doom has been launched, and the wreck of mortality lies before us, we somehow take a melancholy pleasure in gazing at the expressionless features, and linger in blind devotion at the shrine, though the deity which hallowed it has departed!

But when we gaze into the closing grave, we feel that our friend has indeed gone and hidden from us for ever. He has made his final exit from the stage of life, the curtain has fallen, and we shall see him no more, till we ourselves pass behind the scenes.

We know that we can listen to his voice no more breathing eloquence in public, or cheerfulness in the daily intercourse of life. We can never gaze into his eyes again, flashing with genius, beaming with kindness, or shedding tears for human suffering. We shall meet him no more in the busy crowd, or at the quiet fireside. The grave has received him to its remorseless embrace, and his sensible presence is lost to us for ever.

All these thoughts rush upon the mind at that moment and sweep over the heart in a tempest of wild and bitter agony. The brightness of the past but renders the present more dark, the future more gloomy. The pinions of hope, though unbroken, are wet and heavy with tears, and scarcely bear the heart above the grave into which it looks, and where its idol lies. Oh! the last look into the graves of kindred, on the cherished companions of life, would indeed scarcely be endurable, did not revelation assure us of a resurrection, and whisper to our hearts the sweet promise of immortality. God help the man who, at such an hour, has no faith in that prom-

ise, and believes all which was his friend is thenceforth nothing but dust! Infidelity shrinks away from the grave, offering no consolation to the believers of her barren creed, and nothing but Christianity can throw any light upon the burial-hour, and the resting-place of the dead.

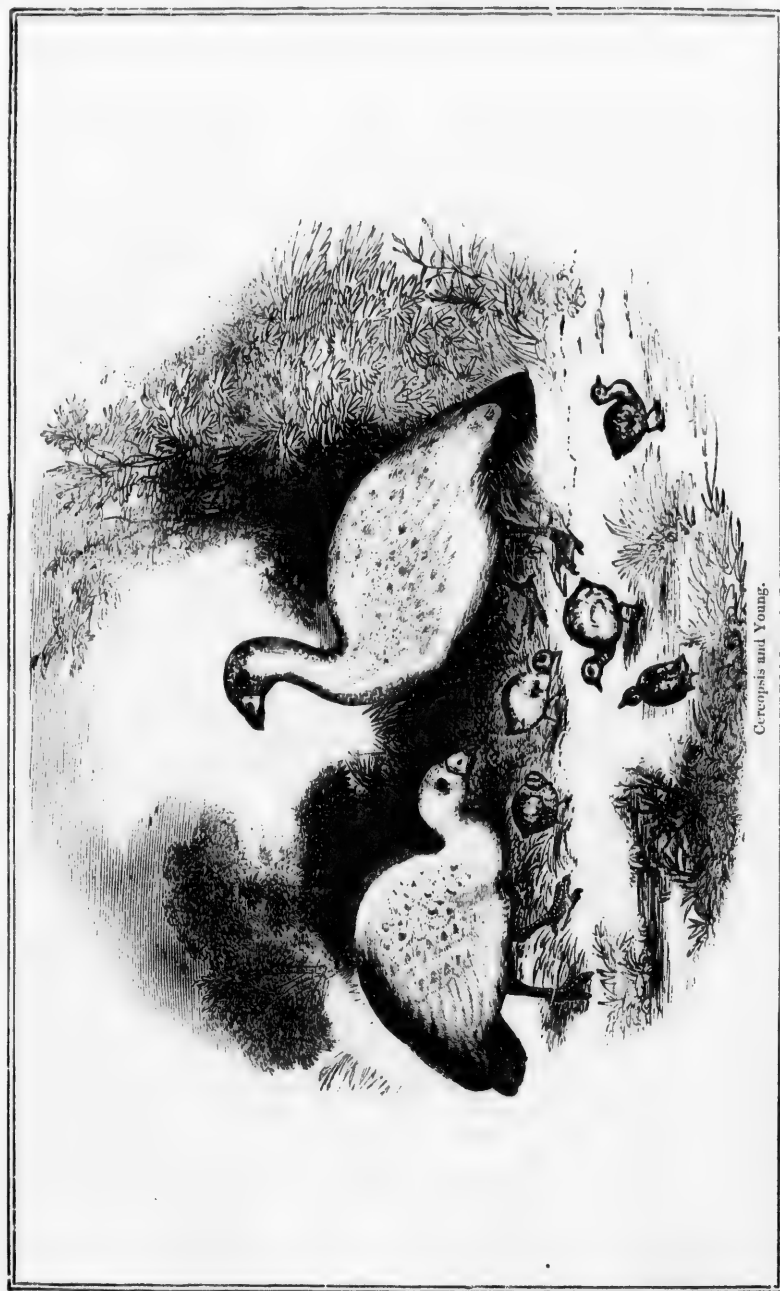
THE CEREOPSIS OF NEW HOLLAND.



NEW HOLLAND is the native country of the *cereopsis*;—and although most voyagers who have visited the distant shores on which it abounds have alluded to it as a species of swan or

goose, it is only within the last few years that naturalists have gained an accurate knowledge of its true character and its natural affinities. The first introduction of the *cereopsis* into the records of science was by the venerable ornithologist Dr. Latham, in the year 1802. He published at that time a figure and description of the bird in question in the second supplement to his "General Synopsis," regarding it as the type of a new genus among the waders, and to this genus he gave the title of *cereopsis*—the specific designation of the bird, of which indeed he had seen only one example, being *Cereopsis Nova Hollandiae*. The term *cereopsis* contains an allusion to the large *cere* covering the base of the bill, but which Dr. Latham, misled by an apparently imperfect specimen, supposed to be extended on the forehead and face: as it is, however, the *cere* is so extensive as to justify the title.

The habits of the *cereopsis*, in a state of nature, have been succinctly detailed by various voyagers. Most probably it is migratory, at least to a certain extent; for Captain Flinders found it more abundant on Goose island in some seasons than in others. It frequents grassy districts and the shore, but rarely takes to the water, its food being exclusively grass. Both at Lucky bay and Goose island these birds were very abundant, and so tame that the



Ciconiiform and Young.

crew of Captain Flinders had no difficulty in knocking them down with sticks, or even in taking them alive. M. Bailly reports to the same effect respecting those seen by him at Preservation island; and Labillardière says that at first they were so little alarmed by the presence of man, as to suffer themselves to be taken by the hand; but in a short time they became aware of their danger, and took to flight on the approach of any one. All agree as to the delicacy of its flesh. From the ease with which the *cereopsis* becomes domesticated, we are not without hope of seeing this bird added to the list of those which enliven our farmyards, and contribute to the luxuries of our table.

Though rightly separated as a distinct genus from that of the common goose, the *cereopsis* belongs to the great family of *Anatidæ*, or swimming birds: in the comparative length, however, of the legs—which are naked for a short space above the knee, and in the imperfection of the webs between the toes—it departs in some degree from the more typical of the family. It exhibits, in fact, the characters that are peculiar to the goose, and which separate them from the duck, carried out to a still further extent. The goose is organized less expressly for water than the duck, or some others of the *Anatidæ*, and the *cereopsis* still less; consequently the beak is shorter, the legs longer, and the feet less webbed. Its food is entirely vegetable: a short stout bill is requisite for plucking it up from the ground. In size this beautiful species equals the common goose; but its bill, as we have said, is shorter, being very thick at the base, and somewhat arched above. The top of the head is pale gray: the rest of the plumage is slate gray, each feather on the back and shoulders being margined with a paler tint, while the greater coverts and the secondary quill-feathers have a round dusky spot near the extremity; the quills and tail-feathers dusky black; tip of the bill black; cere yellow; tarsi orange-yellow; toes and webs black.

The markings of the young, while yet covered with down, are very singular: the ground color is white, but a stripe of grayish-brown passes along the top of the head and back of the neck; and a dash of the

same color extends from the base of the bill over the cheeks, encircles the eye, and nearly joins the stripe down the neck—which, having attained to the back, spreads and divides into three broad ribands, one of which passes down the centre of the back, while one passes along each side, and occupies the undeveloped wings; the chest and under surface are clouded with brown. When in charge of their young the adults are very pugnacious, driving other birds to a distance with great spirit.

AUSCULTATION.*



FROM the earliest period, physicians have known that disease in the cavity of the chest might occasionally be detected by the ear; but it was not until about seventy years ago that any express

rules were laid down upon this subject. The merit of being the first methodical auscultator is due to Dr. AVENBRUGGER, a physician of Vienna, who published a short treatise on this subject in the year 1761. It is written in Latin, and is entitled "A New Discovery of the Art of Detecting Diseases in the Interior of the Chest by Percussion." When the chest of the patient is struck by the fingers of the physician, if it is healthy, it gives a sound, says Dr. Avenbrugger, like that of a drum covered with cloth; whereas, if it is diseased, the sound produced is as if solid flesh had been struck.

In performing this examination, the chest of the patient must be covered with his shirt, or else the fingers of the physician with a glove, which must not be made of glossy leather; for if the bare chest is struck with the bare hand, the concussion of smooth surfaces produces an external sound which obscures the internal one. The following eight general

* This word signifies listening; but, in medicine, means the art of distinguishing diseases by the sense of hearing.

rules are clear, correct, and well expressed:—

1. The duller the sound is over the chest, and the nearer it approaches the sound of solid flesh, the greater is the disease.

2. The larger the space over which this dullness extends, the greater is the disease.

3. It is worse for the left side to be affected than the right.

4. It is less dangerous that the front and upper part of the chest (viz., from the collar-bone to the fourth rib) should be destitute of sound than the lower part.

5. It is more dangerous that the sound be absent in the posterior part of the thorax than in the front and upper part.

[This rule is evidently the same as the last, in different words.]

6. If one side of the chest is entirely destitute of sound, it is a fatal sign.

7. If the sternum (viz., the front and central part of the chest) is without sound, it is a fatal sign.

8. If the place which the heart occupies gives the sound of solid flesh over a great space, it is a fatal sign.

The reason of the last rule is this: the heart from its solidity, produces a loss of resonance over the space which it occupies; and, therefore, a great extension of this dullness shows a great enlargement of the heart—an incurable disease.

When there is a fluid in the chest there will be a loss of resonance: just as there is when the lungs, having lost their natural spongy texture, have become solid—a disease which Avenbrugger calls *schirrus* of the lungs; but which is now termed *hepatization*, from *hepar*, the Greek word for liver. Percussion, however, will almost always succeed in determining whether the loss of sound is produced by the presence of a fluid or by hepatization; for, in the former case, the patient, by altering his attitude, will change the position of the fluid, and thus transfer the dullness of sound from one spot to another; but this ingenious method of discriminating the nature of the disease will, of course, fail in those rare cases in which one side of the chest is entirely filled with fluid.

But little advance seems to have been made from Avenbrugger to Laennec, the

distinguished inventor of the stethoscope. This is a tube, usually made of wood, one end of which is applied to the chest of the patient, and the other to the ear of the physician. By this contrivance, the sound of the patient's respiration, as well as voice, is transmitted in the most distinct manner, and the minutest variations from the healthy standard can be distinguished by a practised ear. In children, for instance, the sound produced by respiration is louder and more acute than in adults; but this acute breathing often occurs in grown-up persons, when, one lung being diseased, the other is forced to work for both. It is known among stethoscopists by the name of *puerile* respiration. Or, let us suppose a patient in an advanced stage of consumption, in whose lungs cavities have been formed by the suppuration of tubercles; if the stethoscope be applied to the chest of such a patient when he is speaking, his voice will be heard echoing from the cavities in his lungs: this morbid resonance is called *pectoriloquy*. Such are a few of the more interesting points depending on auscultation, a subject on which large volumes not only might be, but have been, written. In comparing the methods of Avenbrugger and Laennec, we must acknowledge that, if percussion is more simple, the stethoscope affords more information; but then this advantage is perhaps counterbalanced by the extreme difficulty of its application—a difficulty so great as not always to be surmounted by years of study. It is for this cause that we have touched but slightly on the use of the stethoscope, or chest-viewer, as we thought it needless to perplex general readers with refined distinctions which harass the scientific, and even left Laennec himself sometimes at fault.

We touch upon subjects of this nature principally to show by what slow steps the knowledge of diseases has advanced,—what slight symptoms indicate healthy or deranged functions—how delicate are the tests which they present, even to the most practised physician—and how contemptible, therefore, are those pretensions which would make the medical science consist in a few empirical rules, applied with little observation and less philosophy.

THE USES OF THINGS.



UCH error and misunderstanding of things has been produced in this world of ours, from the extremely limited and imperfect sense in

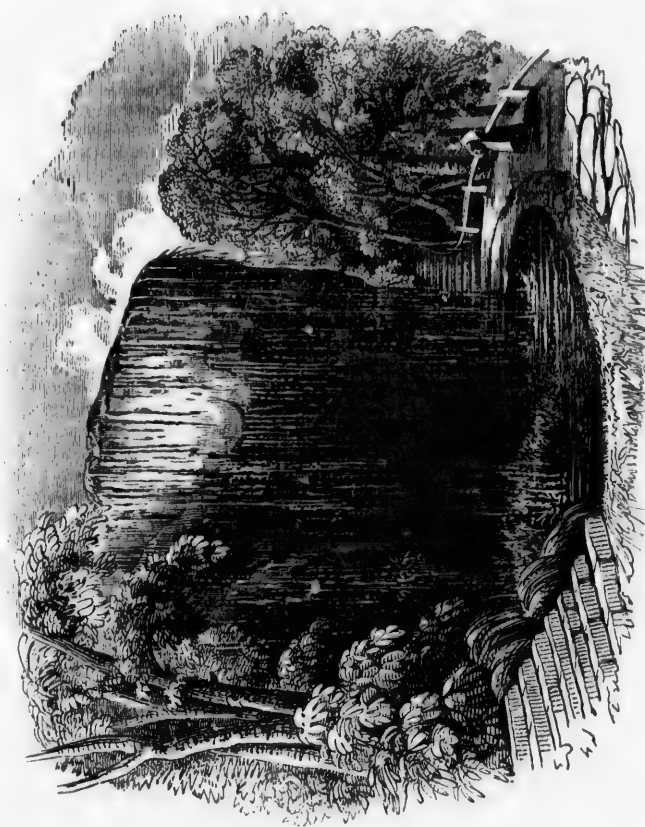
which the word *use* has come to be employed. It is a common error to apply this expression to those things only which are of manifest and immediate advantage—to those whose effects upon us are visible and material, and can be estimated in the scale of mercenary gain. Hence utility has come to be associated with the idea of narrowness and illiberality. The man who meets every object, custom, and amenity of life, with the ever-recurring question, "What is the use?" and accepts or condemns it according as he is able to give an answer, is regarded, and justly, of an illiberal and contracted mind. Such a man is perpetually on the rack to discover what is beyond his power to discern; he is haunted by a phantom which for ever eludes his pursuit. He is unable to surrender himself to an object or enjoyment, simply for its own sake, and thus mars his own happiness, by a constant and ever-restless anxiety.

All this arises, as we have said, from a misapprehension of wherein utility consists. It is from making money, which is the universal standard of all value with mankind, the standard of utility. So that nothing is deemed useful, but what either directly brings or may become the pander of this all-potent requisite. Now a great part, and by far the greatest part of the blessings of life, do not admit of this estimate; they are too fine and inestimable to be weighed in the gross scale of dollars and cents. Such are poetry, music, the pleasures of taste, and the principle of beauty in general. We have known persons who could not discover the use of a rose, or a beautiful landscape, or the gorgeously-woven hues of sunset. To such persons they are truly without any use. They lack the sense to discern and appreciate it. But is any one of all the lav-

ish gifts and creations of nature entirely without use? Alas! no. Nothing which comes from her liberal hand is created in vain. The humblest flower that blends its fragrance with the breath of morning, as well as the sun-braided rainbow that connects earth with heaven, has a use and most emphatic meaning to him who opens his heart to receive it. How ought the exuberance, the unstinted liberality, the varied and surpassing beauty of nature, to correct the narrow and self-formed views which some men entertain of utility!—These are useful in a higher and finer sense than is theirs to comprehend: nothing, it may be affirmed, is altogether useless, which tends to refine and liberalize the human mind—to make men wiser, better, less selfish in their ends, and more in sympathy with others.

There are some things of which it is improper, and a perversion of nature, to affirm that they have any use: which exists in, and for themselves, and are to be pursued for their own sake. It would be a strange misapplication of language to inquire what is the use of truth, or virtue, or, as we conceive, of beauty. That is a poor and false philosophy which attempts to found all beauty on the basis of utility. It degrades this divine and exalted principle from its true sphere, where God has placed it, to the low level of adventitious circumstance. It is perverting that which claims only love and admiration, to be the ignoble pander of profit and advantage. That is the highest perfection where beauty and utility are found united, but the one is no more dependent on the other than the principles of geometry are dependent on artificial lines and angles. The one is the highborn and eternal child of reason, the other the base offspring of want and necessity.

HUMANITY.—True humanity consists not in a squeamish ear; it consists not in starting or shrinking at tales of misery, but in a disposition of heart to relieve it. True humanity appertains rather to the mind than to the nerves, and prompts men to use real and active measures to execute the actions which it suggests.



Dropping Well at Knarsborough

THE DROPPING-WELL AT KNARESBOROUGH.



KNARESBOROUGH, an ancient town in Yorkshire, England, though not of large extent, is situated in an interesting part of the country, and has some interesting historical and traditional

associations connected with it. The town itself is not particularly remarkable; it is a parliamentary borough, and the manufacture of linen is carried on in it to a considerable extent. The Nidd runs close past it—a stream of minor importance generally, but which, in its short course from the high moorlands till it joins the Ouse, flows through some delightful scenery. On one side of the river (the side on which the town lies) are the ruins of Knaresborough castle. Opposite is the famous Dropping-Well, and in the cliffs, or steep banks, are caves or excavations made in ancient and modern times, but alike in the circumstance of having been formed by persevering but misapplied industry. One excavation bears the name of St. Robert's Cave (St. Robert was a famous ascetic of the thirteenth century, whose chapel and hermitage are also shown here), but which is rendered more remarkable as having been the scene of the murder committed by the schoolmaster Eugene Aram, whose memory has been embalmed in a novel. Other excavations were formed by an industrious weaver and his son, who also cut the cliff into terraces, rising one above another, and planted them with flowering shrubs and evergreens.

The walk along the river to the Dropping-Well is delightful. The spring rises at the foot of a limestone rock, at some little distance from the rock, where it spreads and trickles over, falling in a number of little streams, with a kind of tinkling sound. Dr. Short's description of the well, written in 1734, seems to be the progenitor of subsequent accounts. He says: "The most noted of the petrifying waters in Yorkshire is the Dropping-Well at Knaresborough, which rises up about fourteen yards below the top of a

small mountain of marlstone (properly a limestone of a very coarse grain), on the west side of the town and river, and about twenty-six yards from the bank of the Nidd; then it falls down in the same contracted rapid stream about a yard, and at a second fall at two yards' distance it comes two feet lower, then three or four, and so falls upon an easy ascent, divides and spreads itself upon the top of an isthmus of a petrified rock generated out of the water, and there falls down round it: about four or five yards from the river, the top of this isthmus or rock hangs over its bottom four yards."

The petrifying property of the water of the Dropping-Well is owing to a gritty or sparry matter, which encrusts the objects it is deposited on. Mr De la Beche says: "Springs are seldom or ever quite pure, owing to the solvent property of water, which, percolating through the earth, always becomes more or less charged with foreign matter. . . . Dr. Webster describes the hot springs of Furnas (in the volcanic district of St. Michael, Azores) as respectively varying in temperature from 73° to 207° Fahrenheit, and depositing large quantities of clay and siliceous matter, which envelop the grass, leaves, and other vegetable substances that fall within their reach. These they render more or less fossil. The vegetables may be observed in all stages of petrification."

MOTIVES.



THE knowledge that we are rational beings, and that as such we should ever well consider ere we determine to act, seems to have induced the general belief that action, or the omitting to act, is always preceded by some immediate impelling motive. Accordingly, the imputing of motives is one of the most common occurrences in life. No matter what the nature of the subject—be it great or small, important or non-important—straightway is

it believed to have had its origin in some motive. If a party give the right instead of the left side of the way, he is supposed to be actuated by some preconsideration; if he address you as "Dear sir," instead of "My dear sir," there is no doubt about it; if he subscribe himself "Yours obediently," instead of "Yours faithfully," it is equally certain; if he omit to take wine with you, the whole affair is as clear as the light of day. Now, nothing can be more incorrect than this view—nothing more true than that on ordinary occasions we all act independently of any motive whatever. In going home from the city, for example, we perhaps invariably walk on one side of the way, although we may have no motive for doing so—not even that of convenience. Perhaps we are occasionally taciturn, and not disposed at all times to be conversible; and yet it may be that for such silence we have not a single discoverable motive. Every or any thing else but motive may have an influence in producing the particular state or occurrence complained of or remarked on. Habit, peculiar temperament, accident, thoughtlessness, unavoidable circumstances, may each occasion its portion of the results usually attributed to this otherwise certainly important cause of men's actions; but they are all overlooked in an account of the matter. One party will become exceedingly suspicious at the non-answering of a letter, another very angry at the omission to acknowledge a bow or other compliment. The correspondent in the one case had simply forgotten the letter of his friend—a great offence no doubt, but still not so important as that imputed—and the offending party in the other had omitted to return the bow or other compliment from mere inadvertence. Now, had anything but a motive been thought of, or rather had no motive been assigned, all would have been right. But no: we are, as we have observed, reasonable beings, and therefore must be supposed to act at all times with a view to results and consequences.

Motives are of course divisible into good and evil; and a good motive, if imputed, can not well be productive of unpleasantness. The misfortune, however, is, that we are more prone to attribute the evil than the good. This unfortunate propen-

sity is occasionally productive of serious consequences. On the occasion of the non-answering of a letter requiring an answer, as on that of the non-return of a compliment, if a motive be imputed at all, it can not be a favorable one; hence coolness, severance of friendship, quarrels. In that of simple taciturnity, we have all the evils resulting from a false conviction of pride, ill-feeling, desire of concealing some important circumstance, as influencing the party disposed to hold his peace. How much more good feeling would there be in the world, and how much more friendly communion among those inhabiting it, were it but possible to eradicate this erroneous practice!

One great reason why it should be eradicated is, that the evil or injustice remains not against the party improperly suspected, but reflects in an equal degree upon ourselves. It is a veritable principle in moral as in physical science that like begets like. Let us attribute improper motives and we shall find that the same will be attributed to us; nay, we shall perhaps also discover that there was good reason for that which possibly arose from accident or inadvertence. On the other hand, let us impute those which are good; and if there be one single spark of feeling or principle in the composition of the party to whom we attribute them, we shall find that he will reciprocate: and whether he have good feeling or not, that he will give us credit for having deserved a good opinion, or at any rate will not conclude that we merited the neglect which had been exhibited toward us. These principles are in daily operation. Apart from the subject of motive, which perhaps implies some circumstance with which we are individually connected, let us unjustly accuse an individual of a desire to act unfairly, and we shall discover that he repels the charge with indignation. Let us give him credit, equally unjustly, for a desire to do that which is honorable, and we perceive that he endeavors to deserve it: our feeling and passions seem so constituted, as reciprocally to act on their like when excited. Thus benevolence acts on benevolence, anger on anger, pride on pride, and self-esteem on self-esteem. Every one knows how the principle operates

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with respect to the education of children;
and it is only to be regretted that it is not
more generally regarded in riper life.

It may be true that to impute good mo-
tives at all times would be ridiculous.
There are certain circumstances under
which they can not be presumed to exist,
and which of course are not included in
these remarks. It may be also true that
in imputing them, we sometimes throw
our own conduct open to misconstruction.
This can only be, however, when we act
without due regard to a principle, and
when we impute good motives at one pe-
riod and bad at another, just according as
our whim and caprice dictate. It can not
happen where we make it the rule always
to adopt the former course, until we are
certain that we are wrong in doing so. In
imputing a good motive, we may occasion-
ally find that we have been mistaken:
but the mistake will be on the better side;
and it will never occur that we have com-
mitted an injustice, or that we have un-
necessarily or foolishly lost a friend.

SHAKING HANDS.



AMONG the first
things which we
remember taking
notice of in the
manners of the
people, were two
errors in the cus-
tom of shaking
hands: some we
observed grasped everybody's hand alike
—with an equal fervor of grip; you would
have thought Jenkins was the best friend
they had in the world; but on succeeding
to the squeeze, though a slight acquaint-
ance, you found it equally flattering to
yourself; and on the appearance of some-
body else (whose name, it turned out, the
operator had forgotten), the crush was no
less complimentary: the face was as ear-
nest, and beaming the "glad to see you"
as syllabical and sincere, and the shake
as close, as long, and as rejoicing, as if
the semi-unknown was a friend come
home from the deserts.

On the other hand, there would be a
gentleman, now and then, as coy of his
hand as if he were a prude, or had a whit-
low. It was in vain that your pretensions
did not go beyond the "civil salute" of the
ordinary shake, or that being introduced
to him in a friendly manner, and expected
to shake hands with the rest of the com-
pany, you could not in decency omit his.
His fingers half coming out and half re-
treating, seemed to think you were doing
them a mischief, and when you got hold
of them, the whole of the shake was on
your side; the other hand did but proudly
or pensively acquiesce—there was no
knowing which; you had to sustain it as
you might a lady's, in handing her to a
seat, and it was an equal perplexity to
shake it or let it go. The one seemed a
violence done to the patient, the other an
awkward responsibility brought upon your-
self. You did not know, all the evening,
whether you were an object of dislike to
the person—till on the party's breaking
up, you saw him behave like an equally
ill-used gentleman to all who practised the
same unthinking civility.

Both of these errors, we think, might
as well be avoided; but of the two, we
must say we prefer the former. If it does
not look so much like particular sincerity,
it looks more like general kindness; and
if these two virtues are to be separated
(which they assuredly need not be, if con-
sidered without spleen), the world can bet-
ter afford to dispense with an unpleasant
truth than a gratuitous humanity. Be-
sides, it is more difficult to make sure of
the one than to practise the other, and
kindness itself is the best of all truths.
As long as we are sure of that, we are
sure of something, and of something pleas-
ant. It is always the best end, if not in
every instance the most logical means.

This manual shyness is sometimes at-
tributed to modesty, but never, we sus-
pect, with justice, unless it be that sort of
modesty whose fear of committing itself
is grounded in pride. Want of address is
a better reason, but this particular instance
of it would be grounded in the same feel-
ing. It always implies a habit of either
pride or mistrust. We have met with
two really kind men who evinced this
soreness of hand. Neither of them, per-

haps, thought himself inferior to anybody about him, and both had good reason to think highly of themselves, but both had been sanguine men, contradicted in their early hopes. There was a plot to meet the hand of one of them with a fish-slice, in order to show him the disadvantage to which he had put his friends by that flat salutation; but the conspirator had not the courage to do it. Whether he heard of the intention we know not, but shortly afterward he took very kindly to a shake. The other was the only man of a warm set of politicians, who remained true to his first hopes of mankind. He was impatient at the change in his companion, and at the folly and inattention of the rest; but though his manner became cold, his constancy became warm, and this gave him a right to be as strange as he pleased.

MASSACRE OF THE MAMELUKES BY MOHAMMED ALI.



HE Mamelukes presented, formerly, one of the greatest obstacles to the consolidation of MOHAMMED ALI's rule in Egypt: he therefore resolved on a scheme for their destruction, which, although successful, was at once treacherous and ferocious. He invited those of the body who were living in the neighborhood of Cairo to be present at a grand festival to be given on the 1st of March, 1811, in honor of his son's being invested with the command of an expedition against Mecca. To this ceremony all the Mamelukes repaired; and when they were within the gates of the pacha's castle, which were closed on them, a shower of musketry was poured down upon them, from which they had no means of escaping. The engraving representing this scene is taken from Count Forbin's "*Voyage dans le Levant*." The following is the count's description of the scene:—

"That audacious militia, the Mamelukes, which, since the time of Malek

Shah, had made Egypt to feel their power, were nearly destroyed by Mohammed Ali. They had received orders to hold themselves in readiness to take part in a grand ceremony, which was to precede the departure of his son for Mecca. 'That day,' said an inhabitant of Cairo to me, 'the sun rose the color of blood!' The pacha looked dark and melancholy: but recollecting that he was to preside at one of the most brilliant fêtes of the mussulmans, he assumed a smile which contrasted remarkably with his general appearance. He had addressed the Mamelukes as the 'Elder Sons of the Prophet;' and called upon them, by the peace which subsisted between them, to celebrate with him the departure of his son for the Holy Tomb.

"In the meantime a number of faithful Albanians were concealed upon the ramparts, the towers, and behind the walls of the citadel. The Mamelukes arrived with the utmost confidence, and the gates were closed upon them. The pacha had placed himself on the summit of a terrace, seated on a carpet, smoking a magnificent *narguilé* (Persian pipe), whence he could see every motion without being seen; behind him were three of his confidential officers. He regarded the scene below with a fixed and terrible look, without speaking a word. The order was given to 'Fire!' and the massacre of the Mamelukes commenced. They were adorned, or rather encumbered, with their finest arms, and mounted on noble horses; but their numbers, their courage, all were useless—they were destroyed!"

Such of the Mamelukes as escaped the indiscriminate massacre within the walls of the castle were seized, carried out, and beheaded; and numbers in the towns and villages, on the calamity which had befallen their brethren being made known, shared a like fate. The remnant retired to Dongola in Nubia; but they were scattered by Ibrahim Pacha: and from that period the total destruction, or at least the complete subjugation of the once proud Mamelukes, may be dated.

Mohammed Ali is a remarkable man. He came into Egypt about the year 1800, a mere soldier of fortune, and gradually raised himself until he was made pacha.

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time a number of faithful concealed upon the ramparts and behind the walls of Cairo. The Mamelukes arrived with silence, and the gates were

The pacha had placed himself on a terrace, seated under a magnificent *narbonne*, whence he could see without being seen; behind him his confidential officers. The scene below with a fixed gaze without speaking a word. He gave the signal 'Fire!' and the Mamelukes commenced. They were armed, or rather encumbered, with arms, and mounted on horseback without their numbers, their ranks useless—they were de-

Mamelukes as escaped the massacre within the walls of Cairo. They were seized, carried out, and numbers in the towns and villages. The calamity which had befallen them was being made known, and the remnant retired to the mountains; but they were scattered by the Pacha: and from that time destruction, or at least the annihilation of the once proud Mamelukes, may be dated.

Ali is a remarkable man. He came to Egypt about the year 1800, and by the loss of fortune, and gradually until he was made pacha.



Mohammed Ali witnessing the Massacre of the Mamelukes.

JUGGLERS OF INDIA.



UGGLERS came forward on one occasion to perform publicly in the yard of the barracks of Madras : many hundreds of people, of all kinds, ages, and denominations, including the soldiery of the establishment, assembled to witness the exhibition, and some little temporary arrangements were made that all might hear conveniently. The leader of the jugglers (who were all, of course, natives of Hindostan) requested the commanding officer to place a guard of men around the scene of display—a precaution which was adopted, and proved a very wise one. The floor of the court, he it observed, was composed of sand, firm and well-trodden. On this ground, then, after some preliminary tricks of an inferior kind, one man was left alone with a little girl, the latter seeming about eight or nine years old. Beside them stood a tall narrow basket, perhaps three or four feet high, by little more than a foot in width, and open at the top. No other object, living or inanimate, appeared upon the ground. After a short period spent by the man in conversing with the girl, he seemed to get angry, and began to rail loudly at her neglect of some wish of his ; the child attempted to soothe him, but he continued to show an increased degree of irritation as he went on. By degrees he lashed himself into such apparent fury, that the foam actually stood upon his lips ; and being naturally of an unprepossessing countenance, he looked to the white spectators at least as like an enraged demon as might be. Finally his wrath at the girl rose seemingly to an uncontrollable height, and he seized her and put her beneath the basket ; or rather, turned the open mouth of the basket over her person. She was thus shut entirely up—the turned bottom of the basket closing her in above. Having thus disposed of the child, in spite of her screams and entreaties, the man drew his sword, which was as bright as the surface of a mirror, and he appeared as if about to wreak some further evil on the object of his ire. Af-

ter some moments, during which he talked to himself and to the enclosed girl, as if justifying his anger, he did actually at length plunge the sword down into the basket, and drew it out dripping with blood, or at least blood-red drops ! The child screamed piteously from her prison, but in vain ; for the man plunged the weapon again and again into the scene of her confinement. As he did so, the cries of the girl became faint by degrees, and in the end died away altogether. The deed of death was consummated.

So, at least, thought most of the horror-struck persons who witnessed this action. And well it was for the chief performer in it that he requested a guard to be placed ; for it required all the exertions of this guard to prevent the aroused soldiery, who believed this to be no trick, but a diabolical butchery, from leaping into the arena and tearing the man to pieces. The excitable Irishmen among the number, in particular, ground their teeth against one another, and uttered language not very complimentary to the juggler. Even the officers, whose better education and experience made them less open to such feelings, grew pale with uneasiness. But observe the issue of all this.

When the man seemed to have carried his rage to the last extremity, warned perhaps by the looks of the soldiers that it would be as well to close the exhibition without delay, he raised his bloody sword for a moment before the eyes of the assemblage, and then struck the basket smartly with it. The basket tumbled over on a side ; and on the spot which it had covered, in place of the expected corpse of the girl whose last groans had just been heard, there was seen—nothing ! No vestige of dress, or any other thing to indicate that the girl had ever been there ! The amazement of the spectators was unbounded ; and it was if possible rendered more intense, when, after the lapse of a few seconds, the identical little girl came bounding from the side of the courtyard—from among the spectators' feet, it seemed—and clasped the juggler around the knees with every sign of affection, and without the slightest marks of having undergone any injury. We have said the astonishment of the assembly was immeasurable ;

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and it might really well be so, seeing that the feat was performed in the centre of a court, every point of the circumference of which was crowded with spectators, whose eyes were never off the performers for one instant. As to the notion of a subterranean passage, the nature of the ground put that out of the question; and, besides, that nothing of that kind existed, was made plain to all who chose to satisfy themselves on the subject, by looking at the scene of performances when they had closed. Every one was sure that the girl had been put below the basket, and that she did not get out of it in the natural way. But she did get out—and how? It is impossible to say, though there can be no doubt that it was accomplished by some skilful manœuvre.

A somewhat similar feat is sometimes performed with animals. A juggler will place a lean dog below one of the baskets, and—presto, pass!—when he lifts it up, you will behold a litter of as fine pups as ever whipper-in could desire. But most people will probably think the tree-trick a more wonderful one than any of these. A juggler, in performing this, chooses either a small spot of earth, of the extent of two or three feet square, and in the open air, or he takes a large flower-pot and fills it with mould for his purpose. Either of the ways will do. Having this small plat of earth before him, and his spectators ranged around at a distance of two or three feet, the juggler shows to the company a *mango*-stone, or the stone found in the centre of the eastern fruit known by that name, which varies in size from that of an apple upward. This stone the juggler then plants in the earth, at the depth of several inches, and covers it up. Not many minutes elapse until the spectators behold a small green shoot arise from the spot. It increases visibly in height and size every moment, until it attains the altitude of a foot or so. It then begins to send off branches from the main stem; on the branches leaves begin to appear, bearing the natural hue of vegetation. Buds next present themselves; the whole affair, meanwhile, assuming the regular aspect, in every particular, of a miniature tree some four feet high. The buds are followed by blossoms, and finally the green

fruit of the mango meets the astonished eyes of all the spectators. "Look, but touch not," is all this time the juggler's word; and he himself also preserves the character of a looker-on. When the fruit has arrived at something like a fair growth for such a tree, the originator of this extraordinary vegetation plucks it and hands it to the spectators. This is the winding up of the charm. The assembled persons handle the fruit, and see nothing in it the slightest degree different from the ordinary produce of the mango, elaborated by the slow vegetation of months. Our informant on these points ate a portion of the fruit brought forth by this jugglery, and found it to taste exactly like the raw mango. The whole process now detailed usually occupies about a quarter of an hour, from the planting of the stone to the production of the fruit. Though he gives away the fruit, the performer does not part with the tree. This feat, which is perfectly familiar to all who have been in India, is certainly an extraordinary one, and affords the most effectual evidence of the power of deception to which the race of jugglers has attained.

The feat of sitting, without seeming support, in the air, is one of the few first-rate Indian tricks which have been performed in Europe; but even this is now held somewhat cheap, the mode of performing it being pretty clearly understood. The feat is performed in this way: In the centre of a ring of spectators, stands the juggler with an assistant. When all is ready for the performance, the assistant holds an ample cloak or awning over the juggler, which covers him completely for the time. In a few minutes this covering is removed, and the juggler is discovered seated cross-legged in the air—unsubstantial air—at the height of a foot or so from the ground. He is in the thin dress of his country, and on one of his arms, which is extended horizontally, in a bent form, and which, as well as the other, has a wide sleeve upon it, a fold of a cloak was negligently thrown; the remainder of the cloak hanging down to, and resting on, the ground. This slight contact of the elbow with the cloak is all that connects the man with terrestrial things. Otherwise, he is totally left in air; and how he

maintains himself there is inexplicable to appearance. But the cloak alluded to seems to be in careless contact with another cloak or portion of attire that rests on the ground further off. Now, it is to be believed that, at the point where the cloak touches the elbow, a spring of a powerful kind passes up the sleeve to the arm, and bends down under his body, placing him probably upon a hoop. The other end of the spring passes off, and finds its support under the second or further-off cloak. The spring, in all likelihood, can be folded up into divisions, so as to be easily concealed while the awning is thrown over the juggler at the close of the performance, and before he gives liberty to the spectators to examine the spot, which he usually does. This is the received explanation of the feat, but there is some difficulty still in understanding the nature of the weight or support which is placed beneath the cloak. This must evidently be of considerable power to sustain his frame; and how he gets it out of the way, is not easily seen. The feats are the result of surprising art, address, or contrivance—and for such the natives of India certainly far excel the whole world.

THE WALRUS.



THE walrus, or morse, in the general shape of the body and position and structure of the limbs, closely resembles the seal, between which group of animals and the *Herbivorous Cetacea*, namely, the manatee, dugong, &c., it seems to constitute an intervening form. Like the seal, the walrus is clothed with short stiff hair, and its body, of great circumference round the chest, gradually diminishes to the hinder paddles; its proportions, however, are more thick and clumsy. In size this animal equals the largest of the seal-tribe, often attaining to the length of twenty feet, and being ordinarily from twelve to sixteen, with a body superior to that of

the largest ox. But besides its huge bulk, the walrus is very remarkable for the construction of the skull, and the character of its dentition—points in which it differs from any of the larger seals, animals which, in other respects, it nearly resembles.

The head of the living walrus is round, and, instead of terminating in a snout, presents two swollen protuberances, forming a sort of tumid muzzle, divided by a longitudinal furrow, above which the nostrils open, as it were, midway between the lips and eyes. From these protuberances, covered with thick wiry bristles, depend two enormous tusks, which, in conjunction with the bright and sparkling eyes of the animal, give to the physiognomy an expression of ferocity which its disposition does not warrant. The round form of the head is not relieved by external ears; a small valvular orifice, as in most of the seals, being all that outwardly denotes the situation of these organs. It is on the peculiarities of the skull that the swollen appearance of the muzzle and the situation of the nostrils depend. The two tusks, which in situation and character are analogous to those of the elephant, are imbedded in enormous *alveoli*, occupying each side of the muzzle anteriorly, and rising above the level of the skull; so that the skull appears as if concealed behind two large mounds of bone, between which, and at some distance above the mouth, opens the nasal orifice. The tusks have open roots, as have those of the elephant; they are directed downward, curve gently back, and are compressed at the sides. They vary in length from eighteen inches to two feet, and are of a proportionate stoutness. The lower jaw, which is destitute both of incisor and canine teeth, is prolonged and compressed at its anterior angle in order to allow this part to pass between the huge tusks, and advance to the anterior margin of the upper jaw, in which (between the tusks) are two incisors, resembling the molars in form, and which, though implanted in the intermaxillary bone, have by many been regarded as molars. In young individuals there are also between these molar-like incisors two small and pointed teeth, which, however, are soon lost; and indeed so are the other

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Walrus.

incisors, for in aged skulls they are seldom or never to be found. The molars, four on each side above and below, are short and obliquely truncate cylinders. The tumid appearance of the muzzle, so remarkable in the living walrus, depends then, as is easily seen, upon the enormous development of the *alveoli*, for the reception of the roots of the tusks. In proportion to the size of the skull, these *alveoli* are larger than those of the elephant, and far more prominent; and the skull, instead of rising above them, falls back and sinks behind them.

The walrus is a native of the polar regions, and in many of its habits resembles the seals. It lives in troops, which visit the shore, or extensive fields of ice, as a sort of home, where they rest and where the females produce their young. In ascending steep icebergs, or the precipitous borders of an ice-bound sea, the walrus uses its tusks with great advantage, and secures itself from slipping by striking their points into the glassy surface, or by lodging them amid the irregularities, and in the fissures or pits of the craggy mass on which it takes its repose. They are also instruments by which the animal tears up the submarine vegetables on which it in a great measure subsists. Its favorite food is said to be the *fucus digitatus*, a coarse kind of sea-weed growing in great abundance in the latitudes which the animal frequents. To this, fish and other matters of a similar kind are most probably added. As weapons of defence, the tusks of the walrus are very effective; and it is said to use them to great advantage in defending itself from the attacks of the polar bear, next to man, its most formidable enemy. It would appear, indeed, that man has either thinned the numbers of the walrus, or driven the herds to localities seldom visited.

Formerly, the walruses used to assemble in almost incredible multitudes in the gulf of St. Lawrence, at the setting in of the spring, and take possession of the Magdalene islands, which they still visit, but in very inconsiderable numbers. As the shores of these islands have a gentle slope, with but few precipitous rocks, they are very accessible; and here the animals are said to remain for many days without

food, as long as the weather is fine, but to hasten to sea on the slightest appearance of rain. The traffic in the oil and skin of the walrus have both tended to thin their numbers, and to drive the remnant to other places of refuge. The fishermen are accustomed to kill them, during the darkness of the night, by torchlight, by the glare of which the creatures are bewildered, and fall an easy prey.

ORIGIN OF AMERICAN ABORIGINES.



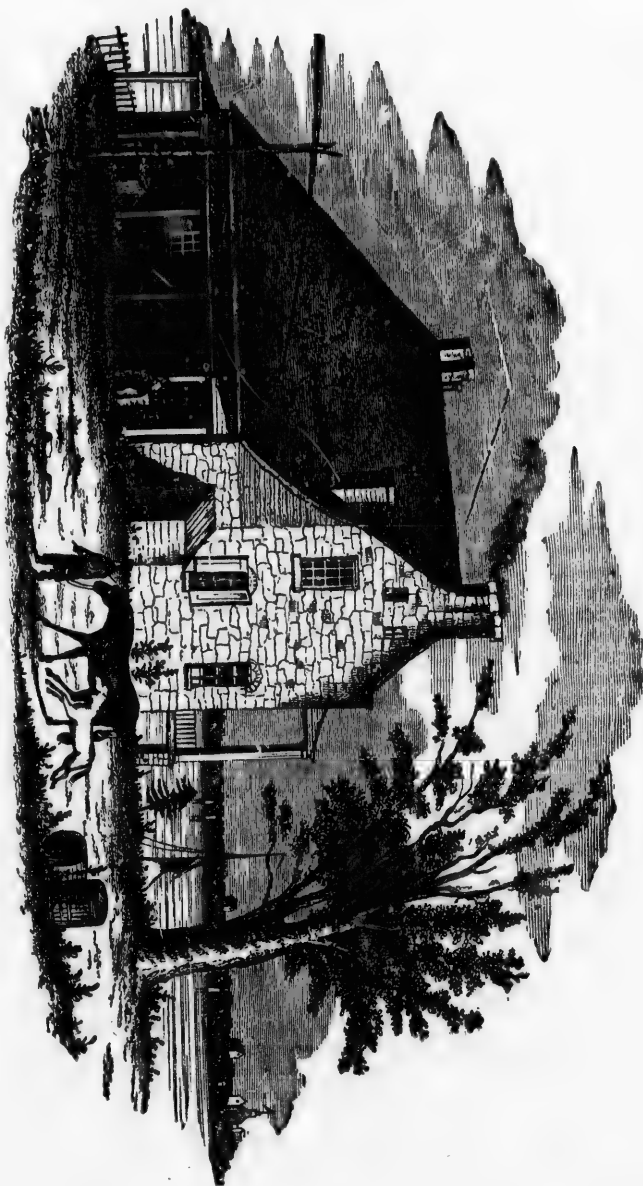
WHATEVER part of the world America may have been peopled from, the first and most important question is that of the TIME at which that event must have occurred. We find in America more than one hundred languages, which, however similar in structure, differ entirely in their vocabulary or words. This difference must have originated either before or after America was inhabited. The first supposition implies that of America having been settled, not by a few distinct nations, which is very possible, but by more than one hundred distinct tribes, of different origin, and speaking entirely different languages. This supposition is inconsistent with the great similarity, in their physical type and the structure of their languages, between almost all the tribes which inhabited America when discovered by the Europeans. If the prodigious subdivision of languages took place in America, for producing such radical diversity we want the longest time that we are permitted to assume. We can not see any reason that should have prevented those who, after the dispersion of mankind, moved toward the east and northeast, from having reached the extremities of Asia and passed over to America within five hundred years after the flood. However small may have been the number of those first emigrants, an equal number of years would have been more than sufficient to occupy in their own way every part of America.

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WHATEVER part of the world America may have been peopled from, the first and most important question is that of the time at which that event must have occurred. We find in one hundred languages similar in structure their vocabulary or once must have originated after America was discovered supposition implies it has been settled, not by which is very possible one hundred distinct origin, and speaking languages. This supposition the great similarity of type and the structure between almost all the languages of America when discovered. If the probabilities took place during such radical divergence of time that we know. We can not see how it could have prevented dispersion of mankind, from the north and northeast, from the extremities of Asia and Africa within five hundred years. However small a number of those first settlers a number of years would be sufficient to occupy any part of America.

AT BENTLEY, THE WEST END OF STATEN ISLAND, NEW YORK.
THE OLD BILLOP HOUSE,





THE OLD BILLOP HOUSE,
AT BENTLEY, STATEN ISLAND, NEW YORK.
BY G. F. DISOWAY.



N approaching New York from Philadelphia by the Amboy route, few objects are more striking to the traveller's eye, than a high, ancient-looking stone edifice, situated near the water, on the extreme west end of Staten Island. This is the "Old Billop House" at Bentley, of which we present a very correct sketch in our present number. Amid the general search for new designs, is it not strange that this beautiful spot has escaped the notice of the artist and historian until now? The place too has some interesting associations worthy of a record.

More than a century ago, a Capt. Billop of the British Navy, took out a patent for the land, embracing 921 acres, which was increased by a second to 1600. At the period of the American revolution, Bentley was owned by Christopher Billop, a gentleman of property, and a member of the house of assembly, who had always opposed the measures which led to a rupture with Great Britain. As soon as the war broke out, he became a partisan leader, and accepted the commission of colonel of the Staten Island militia. Lord Howe, with a large force, took possession of Staten Island on the 4th of July, 1776, and it was held by the British during the whole war; and hence it became the theatre of frequent predatory incursions from the Americans, many of whom had taken up their abode on the opposite shores of New Jersey. By most of these parties violence was committed, and in some instances blood was shed, and lives were lost. Col. Billop, at the time a warm party man and military leader, was closely watched, and it is said was twice taken from his own house, by armed bands from "the Jerseys," and thus made a prisoner. Amboy is in sight, and upon one of these occasions, he was observed by some Americans, who had stationed themselves with a spy-glass in the

church steeple of that town. As soon as they saw him enter his abode, they ran to their boats, rapidly crossed the river, and he was soon their captive.

The British now in possession of New York, had confined in irons several Americans who had been made prisoners; and to retaliate for this measure, Col. Billop was taken to Burlington jail. We have copied the mittimus, as a matter of curiosity, and the method of doing such things at that eventful period. Elisha Boudinot was then commissary of prisoners for New Jersey.

"To the keeper of the common jail for the county of Burlington, greeting:—

"You are hereby commanded to receive into your custody, the body of Col. Christopher Billop, prisoner-of-war, herewith delivered to you, and having put irons on his hands and feet, you are to chain him down to the floor in a close room, in the said jail, and there to retain him, giving him bread and water only for his food, until you receive further orders from me, or the commissary of prisoners for the state of New Jersey, for the time being. Given under my hand, at Elizabethtown, this 6th day of Nov., 1779.

"ELISHA BOUDINOT,
"Com. Pris., New Jersey."

The commissary at the same time regretted to Billop that necessity made such treatment necessary, "but retaliation is directed, and it will I most sincerely hope, be in your power to relieve yourself from the situation, by writing to New York to procure the relaxation of the sufferings of John Leshier, and Capt. Nathaniel Randal."

At this period, Col. Simcoe of the famous "queen's rangers," had command of a post in Richmond, whence he made a sudden and rapid incursion into New Jersey with his dragoons, and during the fight, his horse was killed, and he himself stunned by the fall was captured by the American militia.

He also was taken to Burlington, and unexpectedly became the fellow-prisoner of Col. Billop. Simcoe severely complained to Governor Livingston of New

* Fitz Randolph was the correct name. He was a bold soldier, a celebrated patriot, and gallantly fell, in one of the New Jersey battles.

Jersey, of their treatment, and addressed General Washington, urging his and Billop's exchange, which was soon afterward effected. Several plans had been laid for the liberation of Simcoe; and the day before his exchange, forty friends of the British cause had reached the neighborhood of Burlington with horses to rescue him.

At the close of the war, Col. Billop with a number of British subjects, left the island for St. John, New Brunswick; and thus his estate at Bentley became confiscated. The old mansion is built of stone, its walls three feet thick, and bears the marks of former affluence and elegance. Like most buildings of the "olden time," it has its ghost and other romantic stories. "There," said the person who now occupies the house, as we entered one of the upper story front rooms, "that spot on the floor, we have never been able to wash out. It is supposed to be blood, and a murder is said to have been perpetrated here. This too is the ghost room, but I have never been disturbed by such visitors, and believe neither of these stories."

A person had visited an adjoining apartment last winter, searching for hidden treasure. He had been told by some mesmerist or fortune-teller of New York, that money was to be found concealed in one of the walls of this room, and absolutely picked with hammer and chisel a large opening, but finally gave over the search as hopeless. This strange credulity was here exhibited in the winter of 1844!

In the cellar of the building, there is a brick vault, 30 feet long, and about 13 wide, finely arched, and may have been used as a place of retreat, or the receptacle for valuable articles in cases of emergency.

As Billop was a well-known "tory," and a military character also, his house must have witnessed many an interview of such men as Lord Howe, General Knipphausen, Col. Simcoe, and other officers of rank in the British service, who had command at various periods on the island. Immediately after the severe battle on Long Island, Lord Howe sent a communication to Congress then assembled in Philadelphia, soliciting that a com-

mittee from that body might meet him, to confer on the difficulties between the two nations. For this purpose, Benjamin Franklin, John Adams, and Edward Rutledge, were appointed. The interview took place in this house, and these noble, patriotic, American spirits, declined every proposition for peace, that would not acknowledge the independence of their beloved country! Lord Howe expressed his distress, that he would be obliged to take such severe measures against the Americans, whom he so much regarded. Dr. Franklin in reply, assured him that the Americans would endeavor to lessen as much as possible, the pain he might feel on their account, by taking the utmost care of themselves.

When the committee took leave of Lord Howe, he had them conveyed to Amboy in his own barge, and as they approached the wharf, Dr. Franklin began to jingle some gold and silver in his pockets. Upon their arrival, he offered a handful of the money to the sailors, but the commanding officer, not permitting them to receive it, he replaced it in his pocket. Afterward he explained his conduct to his associates, by observing, "As these people are under the impression that we have not a farthing of hard money in the country, I thought I would convince them of their mistake. I knew at the same time that I risked nothing by an offer, which their regulations and discipline would not permit them to accept."

There is a beautiful lawn before the house, extending quite down to the water's edge. The views from the mansion are extensive, and rich in natural beauties. Directly in front the eye rests on Amboy bay, the town itself beyond, and the Raritan river, which here expanding into the general body of waters, the whole soon flows onward to the mighty Atlantic.

Toward the south, at a more remote distance, are seen the mountains of Monmouth, and the most striking of all, the bold summits of Neversink, upon whose lofty highlands, the beacon-fires of 1776 blazed, to alarm the country upon the expected approach of the enemy.

What a blessing is PEACE! How changed the scene! Upon these very heights now glister nightly the cheering

rays of the lighthouse, welcoming the traveller of every nation, to our land of freedom and happiness! Where once was heard the horrid din and clarion of war, here now the anvil rings, the merry wheel dances, and the carol of the peaceful ploughboy resounds, while he traces the enriching and silent furrow!

The excellent view of the "Old Billop House," which accompanies this description, was sketched by Alfred De Groot, a promising and native young artist of Staten Island. It is a faithful representation of this interesting and now venerable spot, and which it is the object of this article, to save from neglect and perhaps oblivion.

TRUTH.

"Think on whatever things are TRUE."

THE operation of the mind in regard to truth is twofold. The first is to acquire a knowledge of the truths, and to examine the evidence on which we are to receive them. In respect to those great truths which concern our relation to God, this leads us to a diligent study of the word of God, as well as of his works—and a care and diligence to examine what opinions we have formed on this supreme inquiry, and on what ground we have formed them; what are the objects of belief which we have received as true, and why we have done so. Having by such a careful exercise of the powers of attention and judgment, acquired a knowledge and a conviction of the truths, the next exercise of the mind is to make them subjects of thought, in such a manner that they may produce their proper influence on the moral condition. Now there may be much knowledge of truth, and careful study of evidence, while this great mental exercise is neglected; and the most important truths may thus be received as matters of cold and barren speculation, yielding no results, and exerting no influence over the character. It is against this mental condition that the exhortation of the apostle seems to be directed, calling upon us not only to know the truths, but to make them subjects of thought and reflection, so that they

may fix their influence on the moral economy of the mind.

Do we believe it to be the truth that we are every moment exposed to the inspection of a Being of infinite perfection and infinite purity, from whose all-seeing eye nothing can cover us, and to whom even the thoughts of the heart and the whole moral condition within are constantly open? If we make this solemn truth the subject of frequent and serious thought, what influence must it not produce upon the discipline of the heart, and the whole of our conduct in every relation of life. No man can put away from him the truth that a day is fast approaching when he must lie down in the grave; but it is also a truth, that another day will come with equal certainty, when, at the voice of the Eternal One, the graves shall yield up their dead, and those who have slept in death shall arise to judgment. Did we think of this truth with a seriousness in any degree adapted to its solemn interest, and make the reflection a frequent and habitual exercise of the mind, it could not fail to make us feel the value of the soul which is to live for ever; and to force upon us the habitual conviction, how trivial in importance are the highest concerns of time, and how big with momentous interests are the concerns of eternity.

THE AYE-AYE.



HIS extraordinary animal, respecting the true situation and affinities of which a great many conflicting opinions have been advanced, and upon which naturalists are still divided, is a native of Madagascar, where it is either extremely rare, or at least a tenant of remote solitudes seldom visited by the aborigines of the island, and never by Europeans. One specimen alone exists in Europe, brought home by Sonnerat, its discoverer, in 1781, which is carefully preserved in the Royal Museum of Paris. Sonnerat observes that



The Aye-Aye (*Cheiromys Madagascariensis*).

it seems allied to the lemurs, the monkeys, and the squirrels; and subsequent writers have taken opposite views, according as they have been biased by one part of its organization or another. Guided by its singular dentition, Pennant placed it among the squirrels, the former under the title of the aye-aye squirrel, the latter under that of *sciurus Madagascariensis*. Of its habits we know nothing but from the account of M. Sonnerat, who kept two of these animals, viz., a male and a female, alive in captivity. It would appear that their habits are nocturnal. By day they see with difficulty, and the eyes, which are of an ochre color, resemble those of an owl. Timid, quiet, and inoffensive, they pass the day in sleep, and are not aroused without difficulty; when awake, their motions are slow, as those of the lori, and they have the same fondness for warmth; their thick fur indeed sufficiently proves their impatience of cold, the more needful, as night (between the temperature of which and that of the day in intertropical countries there is a great difference) is the season of their activity. During the day the aye-aye slumbers in its secluded retreat, namely, some hole or cavity, in which it conceals itself, and from which on the approach of genial darkness it issues forth in quest of food; as the structure of its teeth indicate, its diet consists of buds, fruits, and other vegetable matters, to which may be added insects and their larvae, for which it is said to search in the crevices and chinks of the bark of trees, dislodging them by means of its long claw-furnished fingers, and by the same means conveying them to its mouth. The individuals alluded to, which were kept alive by Sonnerat for about two months, were fed upon boiled rice, which they took up with their long slender fingers, using them much in the same manner as the Chinese use their eating-sticks. Sonnerat remarks, that during the whole of the time these animals lived, he never observed them set up their long bushy tail in the same manner as the squirrel does, but that, on the contrary, it was always kept trailing at length.

Of the number of young produced, nothing is known, but we may conclude that they amount at the most to not more than

two at a birth, and perhaps only one. The term *aye-aye* is the native name of this singular animal, and is said to be a resemblance of its voice, which is a feeble cry, consisting of two plaintive syllables.

Notwithstanding the length of time that has intervened from the discovery of the aye-aye by Sonnerat, to the present day, and visited as the island of Madagascar has been by Europeans, nay more, notwithstanding the residence of Europeans within its shores, it is somewhat strange that no additional information should have been collected respecting the habits and manners of this animal—that no additional specimens should have been obtained, and that not a single notice of a living individual having been seen or captured should have appeared in the records of science.

RECREATIONS IN NATURAL HISTORY.



THE following anecdotes have been collected together, from the belief that they are too wonderful to be lost. They illustrate principally the instinct of animals.

There can not be a doubt of their authenticity, for we assure our readers that they have appeared previously, with a few exceptions, in the country newspapers.

The turtle is naturally of a sluggish temperament, but when roused it has been known to do fearful things. Gunter, the great Swiss naturalist, tells an anecdote of one that is quite dramatic in its pathos. He had presented a very fine specimen of a turtle to the lord-mayor, who sent it to the London tavern to be taken care of. The day before the 9th of November, this turtle was allowed to walk up and down the pavement in front of the tavern; but to prevent people running over it, a label was hung round its neck, on which was written, "WILL BE KILLED TO-MORROW." This seemed to prey heavily upon the turtle's mind, for it waddled to and fro, evi-

dently in a very excited state, and a tear was seen distinctly to course down its left cheek, and bedew the surrounding flagstones. The poor creature rolled about with increasing uneasiness every minute, till the lord-mayor's state carriage happening to pass, it slipped off the pavement, and fell deliberately under the forewheels of the cumbrous vehicle. It was picked up a shapeless mass of hopeless callipash, and mutilated callippee. "There is no doubt," says Gunter, "that this was a premeditated act of suicide, for it was proved afterward that nothing but the immense weight of the lord-mayor's carriage could have crushed the shell. Grief at its impending fate evidently impelled the distracted turtle to the rash act."

Horses have been known to predict a frost by going to the blacksmith's the day before to be rough-shod. Franconi tells a story of a mare who would never perform on the stage unless she was on the side of the French. Her spirit of nationality was such, that if she was carrying an Englishman or an Austrian, she would invariably throw him and then run over to the side of the emperor. In this way she has often thrown Blucher and the Duke of Wellington. Napoleon hearing of this extraordinary trait of patriotism in a horse, went expressly to the *Cirque*, and having witnessed the fact with his own imperial eyes, offered Franconi a whole regiment of cavalry in exchange for the mare; but the French Ducrow, to his credit let it be said, would not part with her. Napoleon was piqued, but afterward decorated the mare with the grand cross of the legion of honor.

Pigs have been taught to spell. A singular anecdote is told of one, that indubitably proves the force of early habit in animals generally, but in a pig especially. A learned sow, that was called "Bacon," would always spell Vauxhall with a W. This was always a matter of wonderment, till it was ascertained that she had been born on a market day in Smithfield market. The inveterate misuse of the W at once confirmed her cockney origin.

Le Vaillant, the African traveller, tells some wonderful stories about the instinct of the baboon. He travelled with one for a long time as a guide. Its name was

Snees. He knew the shops where the best sherbet was to be got. Being short of butter once, Snees brought him a number of cocoa-nuts, which he had thrown about till the milk inside had become churned. He watched by his master's side every night, killing the mosquitoes and fleas which swarm about the banks of the Nile. He often helped Le Vaillant in unrolling the mummies, and packing up his trunks. Le Vaillant brought this baboon to Europe, and Snees showed his gratitude by saving his master's life. Thieves were plundering the house, when Snees ran to the alarm-bell, and never ceased pulling it till the inmates were alarmed; the thieves were apprehended just in time, for Le Vaillant says, when he awoke there were two gentlemen at his bedside, the one with a pistol, the other with a carving knife. The day Le Vaillant died, this sagacious baboon broke a blacking bottle—whether accidentally or not is not proved—which blacked him from head to foot; but many persons who knew Snees well, declare this was done purposely, from a desire of the faithful animal to show respect to the memory of his kind master, by going into mourning for him.

The instinct of bears is equally wonderful. There was one at the Zoological gardens, who would never mount the pole on a Sunday, because on that day no cakes are allowed to be sold.

A lady of title informed Buffon that she knew a blackbird who looked at the barometer every morning, and would not go out if it pointed to wet. An anecdote told by a German naturalist of a beaver, is no less wonderful than the above: he declares he saw a beaver weeping over the crown of an old hat. Soon another beaver approached it, and she cried more piteously than the first: then a number of young beavers, attracted by their sobs, came running up, and they all cried too. He accounts for this by saying, that the hat being made of beaver, the animals had evidently recognised in it the skin of one of their own kindred. "Who can say," he asks, "whether this very hat was not to them the sad remains of an affectionate son—the only remembrance of a favorite brother?"

Captain Parry tells a story of a polar bear, which puts the instinct of this animal beyond all doubt; he had given it to one of his sailors, who with this small capital, started showman, and having taught the bear to dance, used to take it about the streets. The sailor afterward assured Captain Parry that he never could get the bear to pass a barber's shop; he accounted for this by saying, that as "Bear's grease was sold only at those places, the animal was in a constant state of fear, lest it should be its fate to be sold in sixpenny pots."

The social grosbeak, a bird which is found about the cape of Good Hope, displays great ingenuity in building its nest, which is constructed as strongly as possible, so as to keep out the March rains. A Genevese traveller records the fact of finding a whole row of their nests, covered over at the roof with bits of an old mackintosh, which they had evidently picked up from one of the frequent wrecks off the coast. What but instinct could have told these sociable grosbeaks that mackintoshes were waterproof?

Many singular anecdotes are told of the instinct of the fox. The most probable of those we have read, is the one of the fox plundering a hen every morning of its eggs, and leaving a piece of chalk, of the same size as an egg, for every one he stole.

The following is amusing, for it proves that the parrot is not so stupid as he is generally represented. Jack Sheppard, when he had just escaped from Newgate, heard called out in a shrill voice, "Does your mother know you're out?" Jack was frightened at first, but recovered his usual courage, when he found it was only a parrot that was hanging over a green grocer's door.

The instinct of the dog, and the cat, and the rat, is so well-known, that one anecdote we think, will suffice to illustrate the three. A terrier and a tom-cat were pursuing a large rat down the street. The rat was almost caught, when it dodged suddenly and ran into a sausage shop. The cat and dog stopped convulsively at the door, and looking up at the yards of sausages, hung down their heads and slunk away quite terror-stricken. This

anecdote indubitably shows that self-preservation is the first law of nature, besides proving that the feeling of veneration for the dead is much stronger in animals than in men.

The following anecdote is so astonishing that we can not help repeating it. We should really doubt the truth of it, unless it was supported by the testimony of the celebrated Walker. Mr. Tiedemann, the famous Saxon dentist, had a valuable tortoise-shell cat that for days had done nothing but moan. Guessing the cause, he looked into its mouth, and seeing a decayed tooth, soon relieved it of its pain. The following morning there were at least ten cats outside his door—the day after that twenty; and they went on increasing at such a rate, that he was obliged to keep a bull-dog to drive them away. But nothing would help him. A cat who had the tooth-ache, would come any number of miles to submit its jaw to him. It would come down the chimney even, and not leave the room till he had taken its tooth out. It grew such a nuisance at last, that he never was free from one of these feline patients. However, being one morning very nervous, he broke accidentally the jaw of an old tabby. The news of this spread like wildfire. Not a single cat ever came to him afterward. It is extraordinary how the cats, in the above instance, acted like human beings!

GROTTO OF NEPTUNE AT TIVOLI.

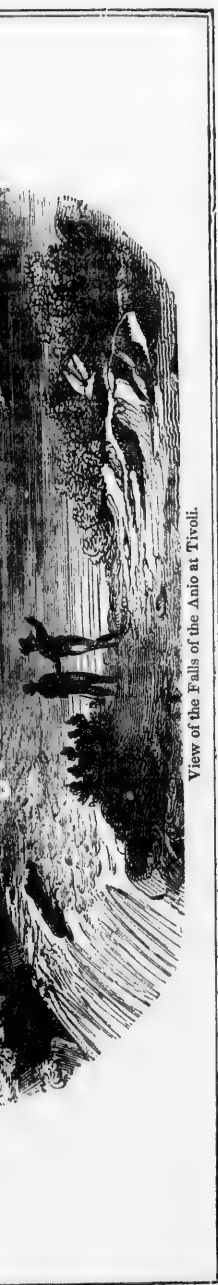


In ancient times, the falls and windings of the river Anio, constituted the pride and ornament of Tivoli, and they are no less celebrated at the present day. Eustace has described them in his "Classical Tour."

The modern name of the Anio is the Teverone. "This river," he says, "having meandered from its source through the vales of Sabina, glides gently through Tivoli, till coming to the brink of a rock



View of the Falls of the Anio at Tivoli.



View of the Falls of the Anio at Tivoli.

it precipitates itself in one mass down the steep, and then, boiling for an instant in its narrow channel, rushes headlong through a chasm in the rock into the caverns below. The first fall may be seen from the window of the inn or from the temple; but it appears to the greatest advantage from the bridge thrown over the narrow channel a little below it. From this bridge also you may look down into the shattered well, and observe, far beneath, the writhings and agitation of the stream, struggling through its rocky prison. To view the second fall, or descent into the cavern, we went down through a garden, by a winding path, into the narrow dell, through which the river flows after the cascade; and placing ourselves in front of the cavern, beheld the Anio, in two immense sheets, tumbling through two different apertures, shaking the mountain in its fall, and filling all the cavities around with spray and uproar. Though the rock rises to the height of two hundred feet, in a narrow semicircular form, clothed on one side with shrubs and foliage, yet a sufficient light breaks upon the cavern to show its pendent rocks, agitated waters, and craggy borders. About a hundred paces from the grotto, a natural bridge, formed by the water working through the rock, enables the spectator to pass the river, and to take another view of the cascade, less distinct with regard to the cavern, but more enlarged, as it includes a greater portion of the super-incumbent rock in front, with the shagged banks on both sides. The rock immediately above and on the left is perpendicular, and crowned with houses, while from an aperture at its side, at a considerable height, gushes a rill, too small to add either by its sound or size, to the magnificence of the scenery. The bank on the opposite side is steep and shaggy, but leaves room for little gardens and vineyards. On its summit stands the celebrated temple commonly called of the Sibyl, though by many antiquaries supposed to belong to Vesta. The path which leads to the Grotto of Neptune is highly picturesque.

Tivoli is but 20 miles from Rome; and few leave that city without visiting a place possessed of such grand and striking scenery, and so rich in classical associations.

SERVITUDE.



It is a curious consideration, that at all times there should have been so large a proportion of mankind in the condition of servitude. This state is found in all but the rudest and most meager communities, such as

that which overspread North America before its colonization; and even in these communities there is a form of service, in as far as the women are compelled by the men to do the hardest and meanest work. It seems to be natural in human society for a certain number, comparatively small in amount, to take the place of masters over the rest—or (to change the form, without changing the substance of the idea) for a certain large number to fall into the place of servants *under* the rest. The proportions of the numbers are different in different societies, and in different conditions of these societies, but never to so great an extent as to affect the proposition, that the great bulk of the people are in a dependent state. There are also differences in the character of service: an early form of it is attended by a complete surrender of personal freedom—in short, slavery; afterward, this is modified into the state of feudal service, where the person is not absolutely the property of the master, but only the will is at his command; finally, the relation of a servant to a master is improved into a simple legal bargain, by which certain duties are undertaken for wages or hire. Still, in all these characters there is one distinct feature, a power in the one party to order and direct, accompanied by a necessity in the other to concede and obey. And this arrangement has existed indifferently in connexion with all forms of government, despotical, republican, and mixed, as if it were a matter with which political arrangements had nothing to do, or as if the master part of the community were the only persons concerned in affairs of state. Even slavery, the worst form of service, has existed quietly for centuries under republican forms, as in

Greece and Rome; the masters, in these instances, manifesting all possible zeal against any encroachment on their political liberties, without ever once dreaming that their poor helots were human beings like themselves, who might be supposed to feel at least as much vexation at a total deprivation of their personal liberty, as their superiors experienced when some little interference was attempted with their elective rights, or a Pericles or a Cæsar began to enjoy a dangerous degree of influence in the areopagus or the senate.

An arrangement so universal as servitude, and so conspicuous at almost all times, and under almost all circumstances, may be presumed to be founded in nature. If not so, it is at least remarkably accommodated to nature; but the more rational supposition, is, that nature dictates the arrangement, and provides for it. A careful observer will, I think, be at no loss to see evidences of the truth of this proposition in common life. Individuals, who have long acted extremely well, and lived happily, as servants, or while employed and directed by others, are often found to do very differently when they become masters. A demand seems then to be made upon them for faculties which they do not possess. They appear to want powers of management, firmness, and energy, to play a *first part* well; they hesitate, get confused, and take wrong courses; or they are facile, and submit to be misled by unworthy counsel. Their utter failure in the objects they had in view, is the unavoidable consequence, and they sink once more into subordination, there to be again at ease, and happy. Nay, so nicely does nature work, that there is a class of minds which seem specially fitted to be *seconds* in command—having a charge over some, but subject to one other, of energy a degree superior. Such was Ajax to Achilles; such Murat to Napoleon. Generally, these lieutenants are possessed of some excellent qualities—unshrinking courage, unshakable fidelity, untiring zeal and devotion, but want the very highest powers of intellect, and therefore when, by fatal chance, made masters, go utterly wrong, and come to destruction—Murat himself an example. It is therefore to be presumed that they were designed by Provi-

dence only for the second place. While kept there, they are fulfilling their mission: let them aspire to a higher, and they at once go out of their proper sphere; their powers and duties are out of harmony; and they fail as a matter of course. Perhaps it would not be too much to say, that even third and fourth degrees of command are provided for in the many various mental constitutions which nature produces. Not that, in every case, these particular constitutions are fixed at one point throughout the whole of life. Many must advance from one point to another by the natural progress of the mind from its nonage to its maturity, or in consequence of educating and edifying circumstances. Upon this depends that system of promotion which exists in all liberal institutions, as well as private establishments. But it is nevertheless true that particular minds, in the particular conditions in which they are for the time, are specially adapted for such grades of command, and for no other.

It must here also be observed, that individuals who are at first in the condition of service, often emerge into that of mastership, and act as well in the one capacity as the other. This is no exception to the rule; it is only an additional illustration of it. Circumstances, not nature, were the cause of the original situation; but nature brought about the change. These individuals were fitted by their mental constitution for the higher function, and could not rest till they attained it. Fortune gave them their first place, not the second, though it is customary to speak of such changes as the work of the blind goddess. So also does it sometimes happen, that those born above service decline into it; and this in like manner, is generally the effect of natural character operating in despite of circumstances.

To dwell a little longer on the idea of a natural institution for producing this great social arrangement—it seems to depend more immediately and expressly on general force of character, than upon any special powers of intellect. Persons in subordinate situations often display great ingenuity and very considerable powers of thought; otherwise, indeed, they would not be fitted for the duties which they are expected to perform. But they are usu-

second place. While fulfilling their mission to a higher, and they their proper sphere; ties are out of harmony as a matter of course. It is not too much to say, that the fourth degrees of command in the many various cases, which nature produces, are fixed at one point of life. Many must point to another by the mind from its non-existence in consequence of changing circumstances. That system of promotion in all liberal institutions, establishments. But it is that particular minds, conditions in which they are specially adapted for command, and for no other. It is to be observed, that in the first in the condition of nature, merge into that of man, well in the one capacity. This is no exception to an additional illustration of circumstances, not nature, the original situation; but about the change. They were fitted by their nature for the higher function, but till they attained it. In their first place, not it is customary to speak of the work of the blind as it does sometimes happen above service decline in like manner, is general character operating in circumstances. It is no longer on the idea of a function for producing this great result—it seems to depend on and expressly on general character, than upon any special intellect. Persons in various often display great and considerable powers of mind, indeed, they would be able to perform the duties which they are fitted for. But they are usu-

ally deficient in self-confidence and ambition; they are often timid, and disposed to rest satisfied with a moderate certainty, rather than undertake a risk for the sake of even the most tempting advantages. Their tastes and propensities have generally considerable power over them; and, these being gratified, they wish for nothing more. It seems to be mainly owing to such causes that the great bulk of mankind are content to give their entire services to those who can only afford them the necessities, and a few of the luxuries of life. What, on the other hand, prompts men to seek the master position, and do all they can to maintain themselves in it, seems to be mainly a general energy of nature, which knows not to submit, and will not rest with humble things. Self-esteem, the love of distinction, the desire of gain, and the feeling which delights to meet and overcome difficulties, appear to be main elements in this impulse; and all of these are not intellectual, but sentimental faculties. There may also be superior intellect in many cases; but what I would contend for is, that the impulsive part of our nature is probably what is most concerned in selecting the individuals who are to form the class of masters. On any such subject as this, it is well to ascertain, if possible, what is the declaration of nature herself. Those who look into physiology for explanations of our mental system, find that the larger voluted brains are those which usually rise to the higher places in society; and some curious proofs of this proposition have been adduced. It is sometimes the practice of hat-makers to have four sizes for *crowns*, the smallest of which is required for the hats of boys, the next for day-laborers and servants, while the largest size is required by the professional and upper classes. An extensive hat-maker in London has stated that the size of hats generally required there for the men who fulfil the duties of the humbler walks of life, are under seven inches in diameter at the part in contact with the head, while the hats required in other departments of society are generally above seven inches. This seems to show that the entire volume of the head, not that minor part alone which is supposed to be devoted to the intellectual

functions, is what produces the grades of society.

It may perhaps occur to some, that there is a disrespect toward a large portion of mankind, in considering them as placed by a natural institution in inferior positions. But this idea will vanish when the subject is viewed in a proper light. There is, in reality, nothing either flattering to one party, or derogatory from the other, in attributing peculiarities which are simply the gift of nature: the possession of a super-average brain is no more a boast than the being six feet high; neither is the having a small one more a discredit than the being only five feet six. Nature makes both for ends which are intended to be generally beneficial, and the one is as essential to the grand design as the other. Considering that in general service is the natural destiny for which a large portion of mankind seems fitted, it becomes the duty of all who are placed in that situation to rest satisfied with an endeavor to turn it to the best account in their power, and to be very careful to ascertain if they have a real vocation to a higher position, before venturing out of their original sphere. They may be fully assured that, if only formed for a subordinate function, and to live as dependents of some stronger minds which can take care of them, they will not be securing their happiness, but endangering it, by aspiring to become masters. It may be borne in mind by them, that, in the lowlier place, if less honored and distinguished, they are also saved from many evils which are hazarded and endured by their superiors. These, as occupying the front rank, have to bear the brunt of every battle. Loaded with grave affairs, and harassed by anxieties, they often spend far more wretched lives than the humblest of serfs. And how often do all their best-laid and most steadily-pursued schemes end in disappointment! Alas for man, and his many aims and doings, how little distinction is there to be seen, in many instances, at the last, between the life that has appeared most brilliant, and that which has seemed the most obscure! How often is the exalted seen to be foolishly puffed up, and the lowly most needlessly invidious! On the other hand, the advan-

tages enjoyed by those who serve need scarcely be enumerated, as they are so obvious—an almost certain supply of all the main requisites of life—duties which, being definite, occasion no feverish excitement or fret—exemption from all the taxing responsibilities which so much embitter the existence of their superiors. The results of the lives of both classes seem to come more nearly to an equality, than the fact of its being a point of ambition to rise from the one to the other would seem to indicate. We deceive ourselves, if we think this ambition an acknowledgment of there being a real superiority in the one state over the other. It is only the exponent of a kind of mind to which the lower state is unsuitable, and which desires to be engaged in circumstances and duties in harmony with itself.

If the relation of master and servant—superior and dependant—were correctly understood, an improvement to the happiness of both parties might be the consequence. It is simply an arrangement for a distribution of duties with a regard to the natural or acquired qualifications of individuals, and therefore does not necessarily imply any right on the one side to domineer, or a duty on the other to be over-obsequious. The commands and obediences which the relation implies, may very well consist with a degree of kindly regard on the master's part, and of respectful attachment on the servant's, which would tend to make the situation of both agreeable. There is one point in the conduct of the former to which too much attention can not be given—an avoidance of everything in language and in deed that can make a servant feel his situation to be one at all compromising his personal respectability or freedom.

Servants are often cooped up in a more or less solitary manner, without permission either to go abroad or to receive visits, and are expected in these circumstances to be perfectly happy, as well as cheerfully assiduous in the performance of their duties. It is an outrage on nature, and therefore nothing but evil can come of it. The social feelings of servants call for exercise, as well as those of their masters and mistresses, and a reasonable indulgence should be allowed to them.

LANDING OF JULIUS CÆSAR IN ENGLAND.



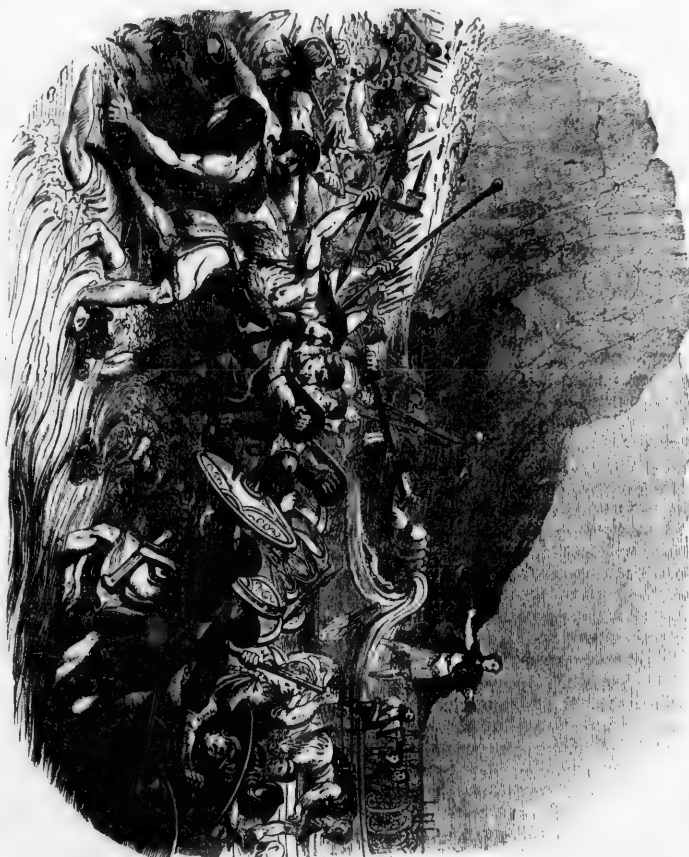
Ten o'clock on a morning in autumn (Halley the astronomer, has almost demonstrated, in a paper in the "Philosophical Transactions," that it must have been on the 26th of August, B. C. 55), Cæsar reached the British coast, near Dover, at about the worst possible point to effect a landing in face of an enemy, and the Britons were not disposed to be friends. The submission they had offered through their ambassadors was intended only to prevent or retard invasion; and seeing it fail of either of these effects, on the return of their ambassadors with Comius, as Cæsar's envoy, they made that prince a prisoner, loaded him with chains, prepared for their defence as well as the shortness of time would permit; and when the Romans looked from their ships to the steep white cliffs above them, they saw them covered all over by the armed Britons. Finding that this was not a convenient landing-place, Cæsar resolved to lie by till the third hour after noon, in order, he says, to wait the arrival of the rest of his fleet. Some laggard vessels appear to have come up, but the eighteen transports, bearing the cavalry, were nowhere seen. Cæsar, however, favored by both wind and tide, proceeded at the appointed hour, and sailing about seven miles further along the coast, prepared to land his forces, on an open, flat shore, which presents itself between Walmer Castle and Sandwich. The Britons on the cliffs, perceiving his design, followed his motions, and sending their cavalry and war-chariots before, marched rapidly on with their main force to oppose his landing anywhere. Cæsar confesses that the opposition of the natives was a bold one, and that the difficulties he had to encounter were very great on many accounts; but superior skill and discipline, and the employment of some military engines on board the war-galleys, to which the British were unaccustomed,

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JULIUS CÆSAR IN LAND.

T ten o'clock on a morning in autumn (Halley the astronomer, has almost demonstrated, in a paper in the "Philosophical Transactions," that it must have been August, B. C. 55), Cæsar landed on a coast, near Dover, at a favorable point to effect an alliance with an enemy, and the Britons were offered to be friends. The offer was offered through their messenger, and tended only to prevent the landing; and seeing it fail of success, on the return of the messenger with Comius, as Cæsar made that prince a prisoner, with chains, prepared to fight, as well as the shortness of the day; and when the Roman ships to the steep cliffs, they saw them by the armed Britons. This was not a convenient time for war resolved to lie by until after noon, in order, he might have the arrival of the rest of his fleet. At the appointed hour, the eighteen transports, which were nowhere seen, appeared, favored by both wind and tide. At the appointed hour, even miles further along the coast, to land his forces, on which presents itself the Castle and Sandwich. The cliffs, perceiving his motions, and sending out war-chariots before, with their main force, and sending anywhere. Cæsar, in opposition of the nature, and that the difficulties were very great; but superior skill and employment of some of the war-galleys, which were unaccustomed,

Landing of Julius Cæsar in England.



and which projected missiles of various kinds, at last triumphed over them, and he disembarked his two legions. We must not omit the act of the standard-bearer of the tenth legion, which has been thought deserving of particular commemoration by his general. While the Roman soldiers were hesitating to leave the ships, chiefly deterred, according to Cæsar's account, by the depth of the water, this officer, having first solemnly besought the gods that what he was about to do might prove fortunate for the legion, and then exclaiming with a loud voice, "Follow me, my fellow-soldiers, unless you will give up your eagle to the enemy! I, at least, will do my duty to the republic and to our general!" leaped into the sea as he spoke, and dashed with his ensign among the enemy's ranks. The men instantly followed their heroic leader; and the soldiers in the other ships, excited by the example, also crowded forward along with them. The two armies were for some time mixed in combat; but at length the Britons withdrew in disorder from the well-contested beach. As their cavalry, however, was not yet arrived, the Romans could not pursue them or advance into the island, which Cæsar says prevented his rendering the victory complete.

The native maritime tribes, thus defeated, sought the advantage of a hollow peace. They despatched ambassadors to Cæsar, offering hostages and an entire submission. They liberated Comius, and restored him to his employer, throwing the blame of the harsh treatment his envoy had met with upon the multitude or common people, and entreating Cæsar to excuse a fault which proceeded solely from the popular ignorance. The conqueror, after reproaching them for sending of their own accord ambassadors into Gaul to sue for peace, and then making war upon him *without any reason*, forgave them their offences, and ordered them to send in a certain number of hostages, as security for their good behavior in future. Some of these hostages were presented immediately, and the Britons promised to deliver the rest, who lived at a distance, in the course of a few days. The native forces then seemed entirely disbanded, and the several chiefs came to Cæsar's camp to offer allegiance,

and negotiate or intrigue for their own separate interests.

On the day that this peace was concluded, and not before, the unlucky transports with the Roman cavalry, were enabled to quit their port on the coast of Gaul. They stood across the channel with a gentle gale; but when they neared the British coast, and were even within view of Cæsar's camp, they were dispersed by a tempest, and were finally obliged to return to the port where they had been so long detained, and whence they had set out that morning. That very night, Cæsar says, it happened to be full moon, when the tides always rise highest, "a fact at that time wholly unknown to the Romans," and the galleys which he had with him, and which were hauled up on the beach, were filled with the rising waters, while his heavier transports, that lay at anchor in the roadstead, were either dashed to pieces, or rendered altogether unfit for sailing. This disaster spread a general consternation through the camp; for, as every legionary knew, there were no other vessels to carry back the troops, nor any materials with the army to repair the ships that were disabled; and as it had been from the beginning Cæsar's design not to winter in Britain, but in Gaul, he was wholly unprovided with corn and provisions to feed his troops. Suetonius says, that during the nine years Cæsar held the military command in Gaul, amid a most brilliant series of successes, he experienced only three signal disasters; and he counts the almost entire destruction of his fleet by a storm in Britain as one of the three.

Nor were the invaded people slow in perceiving the extent of Cæsar's calamity, and devising means to profit by it. They plainly saw he was in want of cavalry, provisions, and ships; a close inspection showed that his troops were not so numerous as they had fancied, and probably familiarized them in some measure to their warlike weapons and demeanor; and they confidently hoped, that by defeating this force, or surrounding and cutting off their retreat, and starving them, they should prevent all future invasions. The chiefs in the camp, having previously held secret consultations among themselves, retired,

trigue for their own

his peace was concluded, the unlucky transports and cavalry, were enabled to reach the coast of Gaul. They sailed with a gentle breeze, and they neared the British coast within view of Cæsar's camp. They were dispersed by a tempest, and were obliged to return to Gaul. It had been so long that they had set out that on the next night, Cæsar says, "a full moon, when the light was the brightest, 'a fact at that time known to the Romans,' which he had with him, he sailed up on the beach, while the rising waters, while the boats, that lay at anchor, were either dashed to pieces or altogether unfit for service. A general panic spread through the camp; for, as the night was so dark, there were no other means of getting back the troops, nor of sending the army to repair the damage; and as it had been Cæsar's design to remain in Britain, but in Gaul, he fled with corn and provisions. Suetonius says, 'In the nine years Cæsar was in command in Gaul, amid many successes, he experienced three signal disasters; the almost entire destruction of the army by a storm in Britain as

invaded people slow in their flight, and of Cæsar's calamity, to profit by it. They were in want of cavalry, and a close inspection of the troops was not so much fancied, and probably some measure to their own demeanor; and they that by defeating this and cutting off their heads, they should have them, they should have them. The chiefs, who previously held secret meetings, retired,

by degrees, from the Romans, and began to draw the islanders together. Cæsar says, that though he was not fully apprized of their designs, he partly guessed them, and from their delay in sending in the hostages promised from a distance, and from other circumstances, and instantly took measures to provide for the worst. He set part of his army to repair his shattered fleet, using the materials of the vessels most injured to patch up the rest; and as the soldiers wrought with an indefatigability suiting the dangerous urgency of the case, he had soon a number of vessels fit for sea. He then sent to Gaul, for other materials wanting, and probably for some provisions also. Another portion of his troops he employed in foraging parties, to bring into the camp what corn they could collect in the adjacent country. This supply could not have been great, for the natives had everywhere gathered in their harvest, except in one field; and there, by lying in ambush, the Britons made a bold and bloody attack, which had well nigh proved fatal to the invaders. As one of the two legions that formed the expedition were cutting down the corn in that field, Cæsar, who was in his fortified camp, suddenly saw a great cloud of dust in that direction. He rushed to the spot with two cohorts, leaving orders for all the other soldiers of the legion to follow as soon as possible. His arrival was very opportune, for he found the legion which had been surprised in the cornfield, and which had suffered considerable loss, now surrounded and pressed on all sides by the cavalry and war-chariots of the British, who had been concealed by the neighboring woods. He succeeded in bringing off the engaged legion, with which he withdrew to his intrenched camp, declining a general engagement for the present. Heavy rains, that followed for some days, confined the Romans within their intrenchments. Meanwhile, the British force of horse and foot was increased from all sides, and they gradually drew round the intrenchments. Cæsar, anticipating their attack, marshalled his legions outside of the camp, and, at the proper moment, fell upon the islanders, who, he says, not being able to sustain the shock, were soon put to flight.

In this victory he attaches great importance to a body of thirty horse, which Comius, the Atrebatian, had brought over from Gaul. The Romans pursued the fugitives as far as their strength would permit; they slaughtered many of them, set fire to some houses and villages, and then returned again to the protection of their camp. On the same day the Britons again sued for peace, and Cæsar, being anxious to return to Gaul as quickly as possible, "because the equinox was approaching, and his ships were leaky," granted it to them on no harder condition than that of doubling the number of hostages they had promised after their first defeat. He did not even wait for the hostages, but a fair wind springing up, he set sail at midnight, and arrived safely in Gaul.

THE IRON AGE.



WE live in the iron age, as poets, from time immemorial, sung of the days in which they lived. Who has not heard that the age of chivalry is gone—that the spirit of poetry

has left this world—that the sordid vices of Mammon, restless and vigilant, have extinguished in our time the true constituents of happiness—faith, hope, and love.

There was much of poetical and moral beauty, and of philosophical truth, though darkly obscured, in many opinions and superstitions which, literally understood, were erroneous or idolatrous. In the degrading system of polytheism itself, the devotee dimly recognised the power and presence of the only and universal God, who by day and night, through the varied phenomena of nature, ever speaks with a still voice to the soul of the intelligent and pious worshipper. And thus in many an error and superstition of bygone ages there was originally a moral and a meaning which we have not always advantageously exchanged for the proud intelligence of

our own. But those who deem that poetry and romance have left us, proclaim only their own dulness. Nature is yet fresh in her beauty as she was centuries ago—the skies, rivers, forests, lakes, the blue ocean, the everlasting mountains, and the varying seasons are all to him “who has a soul attuned aright,” as glorious as ever. The hopes and buoyancy of youth—ever extinguished by advancing years and reproduced in the child—the calmer and more resolute passions of maturer age—“whatever stirs this mortal frame,” shall furnish the materials of romance and poetry so long as the world and the divine portions of our nature continue to exist.

We live in the iron age, but iron has accomplished for us results of which the poet or alchemist never dreamed. The native of our woods could only by a most wearisome process fell the tree which the iron axe so quickly prostrates—the instrument through which the ground, so recently covered with forests and tenanted by wild animal, has become dotted by the flocks and cities of a civilized nation, whose rapid peopling of an entire continent, familiar and common-place to us, shall be the theme of poetry and wonder to many a future age. Our weapons, more terrible than lightning, teach us the folly of war. One instrument of science shows us myriads of animated beings, susceptible of pleasure and pain in the drop of stagnant water, and covering in similar proportions nearly all matter, while another displays to our vision the mountains and oceans of heavenly orbs, and teaches us that far in the regions of infinite space are innumerable worlds, each it may be equalling our own, and like it, teeming in its atoms, with life incalculable. Machinery which to the Roman or Greek would have appeared impossible, propels the huge train of carriages on the iron road, and urges the iron boat against the power of wind and water, through the storms of mid-ocean, or the crashing and solemn icebergs, where the ordinary ship must inevitably perish.

A recent publication of high authority assures us that “writing paper has been manufactured from iron, and that books with both leaves and binding have been made from the same material.”

Manufacturing machinery performs the work of millions of men; and chymistry in a thousand methods produces changes more beneficial than the avaricious alchemist vainly toiled to discover. When the Macedonian conqueror Alexander wished to prove the truth of the Delphian oracle, knowing no better test, he asked to be told what his father then at a distance was doing. Our magnetic telegraph, claiming no supernatural agency, might accurately have answered—and by the same mysterious and subjugated power, the recent corpse itself, starting rudely as if indignant at the interruption of its last repose, may be roused into energy wild and life-like, but transient. The discoveries of science, and varied information of the arts and thoughts of other men and nations, are diffused through the medium of the iron press. We in our iron age have realized things more wonderful, than nursed amid the romance of wild Arabia,

“The wandering tribes require,
Stretched in the desert round the evening fire.”

It is true that the fairy tales and strange legends which our forefathers ceased to believe have now become almost extinct. The chivalry and glory, pomp and savage sports of feudalism have departed, but like a gaudy and imperfect picture, or the illuminated transparency of a theatre, the fascination of feeling which we experience when regarding them through distance or darkness, changes upon a closer view in the light of day to indignant dissatisfaction. Rather than admire the spirit of those times, which colored and gilt by time and imagination may sometimes appear poetically beautiful, as clouds of noxious vapor receive from the sun a brilliancy which is not their own, we should regret that in dark places of the earth are legends and stories as unreasonable as ever, and that ancient feudalism, tyrannical as it was, is surpassed by modern slavery.

A few only of the sublime and wonderful discoveries of our age have been mentioned. Volumes would not suffice to tell all. The riches of the past, most of its histories, experience, literature, and inventions—itsself no poorer for the legacy—the vast discoveries and powers of the present day—and the bright hope for the future, which, reasoning from that which

has already occurred, we dare not limit—
are all for us; but in *serious humility we*
ask ourselves if the increase of happiness
and virtue is proportionate to the increase
of knowledge—whether as children of the
nineteenth century, heirs to its wealth and
power, we use our inheritance to the best
advantage.

NAUPLIA.



THE town of Nauplia, or Napoli di Romania, is situated along the foot of an abrupt rocky promontory of considerable elevation, which projects into the sea at the head of the gulf bearing the same name. It occupies the whole length of the narrow strip of low land between the cliffs and the shore, so that further enlargement is impracticable. It is well fortified, and enclosed by walls on which the "winged lion" is still visible, in proof of their Venetian construction, and though miserably bad, is, upon the whole, one of the best built towns in the Morea, of which it is justly considered to be the maritime key.

It is admirably situated, both in a military and commercial point of view; but the place is very unhealthy, partly owing to the neighboring marshes in the plains of Argos, and partly owing to the total want of cleanliness. Fevers are very prevalent, and the town has often been ravaged by plague. In 1824 it was visited with a dreadful epidemic, which carried off about one third of the population. The interior, with the exception of one square, consists of very narrow, filthy streets, from which the breeze is always excluded by the upper stories of the houses projecting one above the other till they almost meet. The larger houses generally have been built by the Venetians, and are now made subservient to public purposes; but the greater part are Turkish, though very different from the light well-built houses of Constantinople. In these the lower part is invariably appropriated as a stable for

the horses, whence a miserable and often unsafe staircase leads to the upper inhabited apartments. The shops are principally for the sale of wine, provisions, and arms.

At present Naupli is the seat of government and residence of King Otho, and may therefore be considered the capital of Greece; but although it must ever be a place of great importance as a military and commercial post, it is by no means calculated to become the metropolis of the kingdom, from its unhealthiness and very circumscribed extent. The population may amount to 5,000 or 6,000, but fluctuates greatly; it is, however, one of the most thickly-peopled cities in the world, averaging three or four inmates to each room. Since the arrival of King Otho, Nauplia has undergone considerable improvement; and, as security of property becomes more certain, will doubtless make rapid advances, a great number of emigrants from Europe having already established themselves in trade here. The market of Napoli is well supplied with fruit and vegetables in great variety and abundance; but butcher's meat is indifferent. The adjacent country is rich and fertile; even the wildest and most uncultivated parts are covered with beds of thyme, fennel, and mint, which afford inexhaustible materials for honey; but this indulgence must be gratified with caution, as the honey is medicinal in its properties.

The port is exceedingly good and eligible for shipping, being perfectly safe and easy of access. From the bay, the view is at once pleasing, picturesque, and exciting; the lofty, majestic rock, surmounted by the citadel; the busy town and port; the plain and town of Argos, with its Acropolis, backed by a range of lofty mountains, and the snowy summits of Taygetus to the west; all heightened by the associations of former times—contribute to render the surrounding scenery highly interesting. But as soon as the stranger puts his foot on shore, the enchantment ceases and his enthusiasm vanishes; all feelings of pleasure give way to nausea and disgust.

Prior to the revolution, Napoli was the dépôt for all the produce of Greece; and

although this exclusive trade has latterly been shared by other ports, there is still an extensive commerce carried on in wine, oil, corn, wax, honey, sponges, and cotton. The transport of these articles is principally limited to kaïks, or open boats of fifteen or thirty tons burden. Napoli offers no facility for ship-building; but, as some of the islands engage largely in this occupation, it may be expected that, as the mercantile navy increases, commerce will also emerge from the narrow bounds to which it has hitherto been confined. Already, indeed, it has begun to experience the encouraging effects of freedom, order, and peace. The sea-breeze blows furiously up the gulf of Nauplia during the day, and it is the custom, therefore, for vessels to leave the anchorage in the evening, when they catch the land-breeze, which blows during the night, and generally carries them out of the gulf before morning.

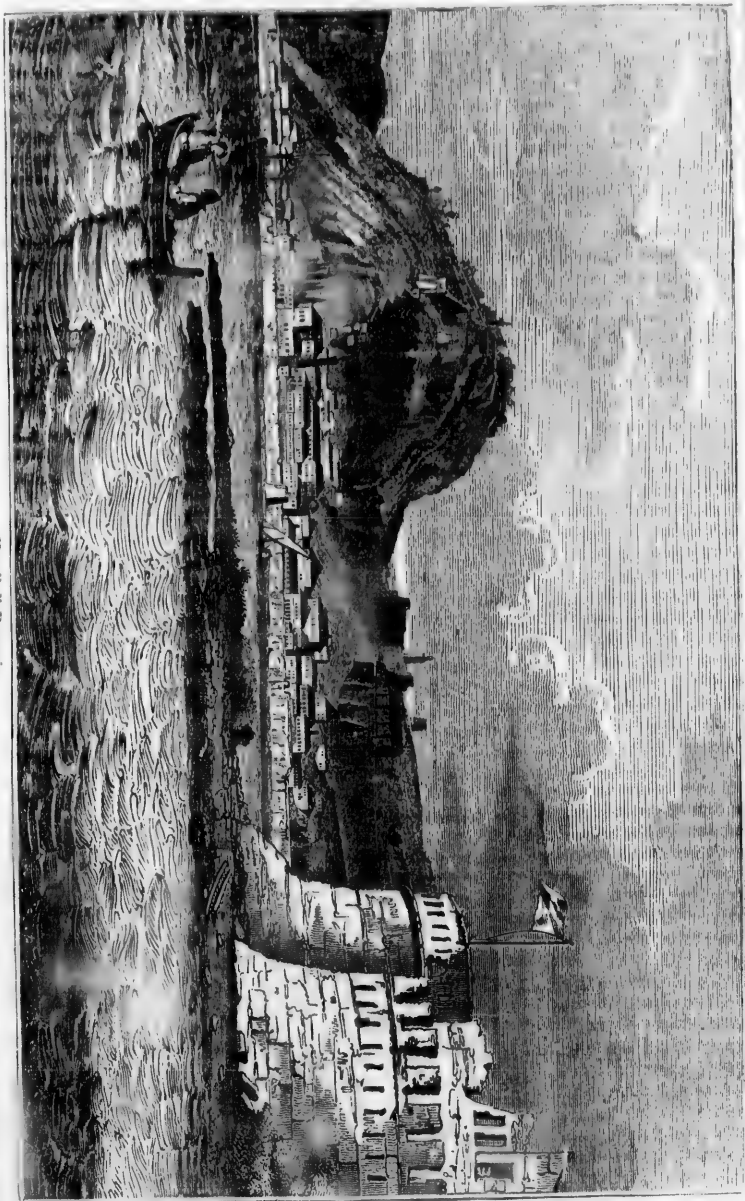
The strength of Napoli is the citadel, which is called the Palamedi, over whose turreted walls a few cypresses raise their sombre heads; it stands on the easternmost and highest elevation of the promontory, and completely overhangs and commands the town. To all appearance it is impregnable, and from its situation and aspect has been termed the "Gibraltar of Greece," an appellation which, when in a better state of defence, it may deserve. It is 720 feet above the sea, and has only one assailable point, where a narrow isthmus connects it with the main land—and this is overlooked by a rocky precipice: the ascent is by flights of steps cut in the rock. Beneath the Palamedi, the land continues at the elevation of about 300 feet to the extreme point of the promontory, and on this are various forts, &c. The present fortifications are chiefly Venetian, repaired at various times by the Turks and Greeks; but the ruins of ancient walls of Cyclopean masonry, on which those of the Palamedi are based, may still be seen. Many pieces of Venetian ordnance remain on the walls to this day. The Palamedi, in which some excellent barracks have lately been built, is capable of containing a large garrison. Besides these points, and the walls which enclose the town and are defended by bas-

tions, there is a small rocky islet in the harbor on which stands the castle of S. Theodore, which, though commanded by the upper forts, would be very formidable to an assailing squadron of ships. The Greeks, in the siege of Napoli, obtained possession of this post very early, and in spite of its disadvantageous position, contrived to annoy, not only the town, but the Turkish garrison in the upper forts; it is at present used as a state-prison. The town of Napoli is supplied with water by a stream issuing from the celebrated fountain of Canathus. It passes by an aqueduct under the cliffs of the Palamedi, and admits of being easily cut off by the besiegers, as it was by the Greeks.

The ancient Nauplia is said to have been built by Nauplius, the son of Neptune, before the Trojan war. Nauplia was subsequently the chief naval arsenal of the Argives. It was desolate in the time of Pausanias, who saw only the ruins of the walls and of a temple of Neptune remaining. The Venetians obtained possession of it in 1460. In 1495 it surrendered to Bajazet, but was again taken by the Venetians, under Morozini, in August, 1586, after a month's siege, and became the headquarters of that nation in the Morea. In 1714 it was treacherously given up to Ali Koumourgi, and was the seat of Turkish government and residence of the pacha of the Morea till Tripolizza was selected as being more central, when it became subject to the bey of Argos. The citadel remained uninterruptedly in the hands of the Turks till the 12th of December, 1822, when it surrendered to the Greeks, after a long and tedious blockade, the Turkish garrison having been reduced to such a state of starvation as to feed on the corpses of their companions. In 1825, Ibrahim Pacha made a fruitless attempt to surprise the place; and it has been the stronghold of the Greeks in their struggle for liberty. In April, 1826, the commission of government held their sitting here, but were obliged to retire to AEgina on account of civil dissensions, and of the revolted chiefs being in possession of the Palamedi. During the presidency of Capo d'Istria, who always resided (and was assassinated) in the town, it again became the seat of government, and on

small rocky islet in the stands the castle of St. though commanded by could be very formidable quadron of ships. The ege of Napoli, obtained s post very early, and advantageous position, y, not only the town, but son in the upper forts; used as a state-prison. oli is supplied with wa- suing from the celebra- anathus. It passes by r the cliffs of the Pala- of being easily cut off as it was by the Greeks. Nauplia is said to have uplius, the son of Nep- Trojan war. Nauplia the chief naval arsenal It was desolate in the e, who saw only the ru- und of a temple of Nep- The Venetians obtained n 1460. In 1495 it sur- et, but was again taken under Morozini, in Au- a month's siege, and be- arters of that nation in 714 it was treacherously Coumourgi, and was the overment and residence he Morea till Tripolizza ing more central, when o the bey of Argos. ined uninterruptedly es till the 12th of De- it surrendered to the ng and tedious blockade, son having been reduced starvation as to feed on r companions. In 1825, made a fruitless attempt ace; and it has been the Greeks in their struggle April, 1826, the commis- ent held their sittin- liged to retire to AE- vil dissensions, and chiefs being in poss- sion During the presidency who always resided (and) in the town, it again of government and on

Napoli di Romania.



he 31st of January, 1833, the prince of Bavaria arrived here as first king of restored Greece.

HUMOROUS PEOPLE.



PERSONS who are innocently good humored are very useful in this world, by diffusing a generous cheerfulness among all who approach them. Habitual vivacity has the recommendation of not only its own pleasurable feelings, but it has a sanitary benefit; for it keeps the blood in proper circulation, quickens the understanding, and even helps digestion. Indeed it conduces to long life; while, on the other hand, the habit of yielding to and fostering sadness of heart, embitters and shortens the days of the young. It is well said by Solomon, that "a merry heart doeth good like a medicine; but a broken spirit drieth the bones." In later times, Bolingbroke gave it as his experience that, "in this farce of life, wise men pass their time in mirth, while fools only are serious," an observation that recalls to memory the lines of the poet—

"Sportsmen find woodcocks by their eyes,
As fools are known by looking wise."

If this be so, it is surely best to be cheerful, and, in the words of Byron,

"To laugh at all things, for we wish to know
What, after all, are all things but a show?"

Sheridan Knowles, in his play of "William Tell," has happily described the blessings of a cheerful temper:—

"Who would not have an eye
To see the sun, where other see a cloud?
A frame so vernal, as, in spite of snow,
To think it genial summer all year round?
I do not know the fool would not be such
A man!"

Humorists would be much more in favor, could they only be taught what are and what are not the proper times and subjects for the exercise of their jocular-ity. Above all things, they ought to refrain from playing off their jests upon the reputations and manners of their friends. The little incidents of the passing hour,

and the lively fancies of the imagination, ought solely to supply the fun of the friendly circle. Natural imperfections and blemishes ought never to be selected as marks for ridicule to shoot its shafts at. It is well to "laugh at all things" that may be properly laughed at; but it is still more commendable to resist all temptations to raise a laugh by personal allusions which hurt the feelings of some one individual in the company. When this virtuous forbearance is strictly observed, a humorist's society becomes an enjoyment to all, for each feels sure that there is no danger of the flying shaft penetrating the sanctuary of friendly secrecy, or going beyond the bounds of good breeding. By sporting with another's weaknesses, infirmities, and personal singularities, we may certainly divert the company for a moment, and gratify our own selfish vanity, which is ambitious to show superiority; but, as Chesterfield justly observes, this is a pretty sure way to make enemies for ever, for "even those who laugh, will, upon reflection, fear and despise us: it is ill-natured, and a good heart desires rather to conceal than expose other people's weaknesses or misfortunes. If we have wit, we should use it to please, and not to hurt: we may shine, like the sun in the temperate zone, without scorching." Conversation may impart pleasantry and cheerfulness, without having even the slightest recourse to personality, an indulgence in which is an infallible sign of an uneducated and unamiable disposition. Barrow, in his "Sermon against Foolish Jestings," remarks, that "The weaknesses of men, of what kind soever (natural or moral, in quality or in act), considering whence they spring, and how much we are always subject to them, do need excuse, and in fairness call for compassion, not for mirth, to be drawn from them; they, in respect to common humanity, should rather be studiously connived at and concealed, or mildly excused, than wilfully laid open and wantonly desecrated on; they are rather to be secretly deplored than to be openly derided."

The truly pleasant and well-behaved humorist will scorn to convert his wit into a sparring weapon or an offensive missile; but will ever be mindful of the observation of St. James, "If any man offend not in

word, he is a perfect man." Ill-natured wits might take an improving lesson from an anecdote or two which we may here relate: In the midst of a gay party at Versailles, Louis XIV. commenced a facetious story, but concluded it abruptly and insipidly. Presently, one of the company having left the room, the king said, "I am sure you must have observed how very uninteresting my anecdote was. After I had commenced, I recollected that it reflected rather severely on the immediate ancestor of the prince of Armagnac, who has just quitted us; and on this, as on every other occasion, I think it far better to spoil a good story than distress the feelings of a worthy man." The celebrated mimic, Griffen, was asked to imitate the person, manner, and singularly awkward delivery of Dr. Woodward, the geologist and physician, in the character of Dr. Fossil, in a farce then preparing under the title of "Three Hours after Marriage." The mimic dressed himself up as a countryman, and went to the doctor to ask his advice about a long series of diseases with which he pretended his poor wife was afflicted. All this he did to justify and prolong the interview, that he might have sufficient time to study the doctor's manner. This accomplished, he offered him the fee of a guinea, which the doctor declined, saying, "Keep your money, poor man! keep your money! you have need of all your cash and all your patience too, with such a load of diseases at home." The actor, on his return to the farce-writer, related this conversation, and concluded by declaring that he would sooner die than prostitute his talents by making a public laughing-stock of Dr. Woodward, who, receiving him as a poor man, had shown tender humanity and compassionate sympathy at the narrative of his assumed calamities.

As the more a person manifests uneasiness at the direct attacks of a heartless humorist the better sport he proves to him, it is wisest to receive his sallies with apparent indifference, however acutely one may feel his cruel jokes.

He who refuses to do justice to the defenceless, will often be found making unreasonable concessions to the powerful.

THE MIND BEYOND THE GRAVE.

We can not but feel that we are beings of a twofold nature—that our journey to the tomb is short, and the existence beyond it immortal. Is there any attainment that we may reserve when we lay down the body? We know that of the gold which perishes we may take none with us when dust returneth to dust. Of the treasures which the mind accumulates, may we carry aught with us to "that bourne whence no traveller returns"?

We may have been delighted with the studies of nature, and penetrated into those caverns where she perfects her chymistry in secret. Composing and decomposing, changing matter into nameless forms, pursuing the subtlest essences through the air, and resolving even that into its original elements, what will be the gain when we pass from material to immaterial, and this great museum and laboratory, the time-worn earth, shall dissolve in its own central fires?

We may become adepts in the physiology of man, scanning the mechanism of the eye, till light itself unfolds its invisible laws, of the ear, till its most hidden reticulations confessed their mysterious agency with sound, of the heart, till that citadel of life revealed its hermit policy, but will these researches be available in a state of being which "eye hath not seen, nor ear heard, nor the heart of man conceived"?

Will he who fathoms the waters, and computes its pressure and power have need of this skill where there is no sea? Will the mathematician exercise the lore by which he measures the heavens, of the astronomer, the science which discovered the stars, when called to go beyond that light?

Those who have penetrated most deeply into the intellectual structure of man, lifted the curtain from the birth-place of thought, traced the springs of attention to their fountain, and thrown the veiled shrinking motive into the crucible, perceive the object of their study taking a new form, enter into a disembodied and unknown state of existence, and receiving powers adapted to its laws and modes of intercourse.

We have no proof that the sciences to which years of labor have been devoted will survive the tomb. But the impressions they have made, the dispositions they have nurtured, the good or evil they have helped to stamp upon the soul, will go with it into eternity. The adoring awe, with deep humility, inspired by the study of the planets and their laws, the love of truth which he cherished, who pursued the science that demonstrates it, will find a response among arch-angels. The praise that was learned amid the melodies of nature, or from the lyre of consecrated genius, may pour its perfected tones from a seraph's harp. This goodness taught in the whole frame of creation, by the flower lifting its honey-cup to the insect, and the leaf drawing its green curtain around the nursing chamber of the smallest bird, by the pure stream, refreshing both the grass and the flocks that feed on it, the tree, and the master of its fruits, the tender charity caught from the happiness of the humblest creature, will be at home in his presence, who hath pronounced himself the "God of love."

The studies, therefore, which we pursue as the means of intellectual delight, or the instruments of acquiring wealth or honor among men, are valuable at the close of life only as they have prompted those dispositions which constitute the bliss of an unending existence. Tested by its bearing and result, it transcends all other sciences. The knowledge which it imparts does not perish with the stroke which disunites the body from its ethereal companion. While its precepts lead to the highest improvement of this state of probation, its spirit is congenial with the ineffable reward to which we aspire. It is the preparation for immortality, which should be daily and hourly wrought out, amid all the mutations of time.

LIGHT FROM FLOWERS.

AMONG the remarkable effects produced through the agency of light, a singular phenomenon in natural history is given in "Dick's Practical Astronomer," as related by a Swedish lecturer. One evening, he

perceived a faint flash of light repeatedly dart from a marigold. Surprised at such an uncommon appearance, he resolved to examine it with attention; and, to be assured it was no deception of the eye, he placed a man near him, with orders to make a signal at the moment when he observed the light. They both saw it constantly at the same moment. The light was most brilliant on marigolds of an orange or flame color, but scarcely visible on the pale ones. The flash was frequently seen on the same flower two or three times in quick succession, but more commonly at intervals of several minutes; and when several flowers in the same place emitted their light together, it could be observed at a considerable distance. The phenomenon was remarked in the months of July and August at sunset, and for half an hour when the atmosphere was clear; but after a rainy day, or when the air was loaded with vapors, nothing of it was seen. The marigold, monk's-hood, orange-lily, and Indian pink, emitted flashes more or less vivid. As to the cause of this phenomenon, says Dick, different opinions may be entertained. From the rapidity of the flash and other circumstances, it may be conjectured that *electricity* is concerned in producing this appearance. Mr. Hager of Sweden after observing the flash from the orange-lily, the antheræ of which are at a considerable distance from the petals, found that the light proceeded from the petals only; whence he concludes that this electrical light is caused by the pollen, which, in flying off is scattered on the petals.

THE MOCKING-BIRD.



HIS very extraordinary bird, which, in extent and variety of vocal powers, stands unrivalled by all the feathered songsters of America or perhaps any other country, is peculiar to the New World; and inhabits a very considerable extent of both

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The Mocking Bird



North and South America, having been traced from the states of New England to Brazil, and also among many of the adjacent islands. They are, however, much more numerous in those states south than those north of the river Delaware; being generally migratory in the latter, and resident (at least many of them) in the former. A warm climate, and low country not far from the sea, seems most congenial to their nature; the species are accordingly found to be less numerous to the west than east of the great range of Alleghany, in the same parallels of latitude. In these regions the berries of the red cedar, myrtle, holly, many species of smilax, together with gum berries, gall berries, and a profuse variety of others, abound, and furnish them with a perpetual feast. Winged insects also, of which they are very fond and very expert in catching, are there plentiful even in the winter season.

The precise time at which the mocking-bird begins to build his nest varies according to the latitude in which he resides, from the beginning of April to the middle of May. There are particular situations to which he gives the preference. A solitary thorn-bush, an almost impenetrable thicket, an orange-tree, cedar, or holly-bush, are favorite spots and frequently selected. It is no great objection to the bird that a farm or mansion-house happens to be near; always ready to defend, but never over-anxious to conceal his nest, he very often builds within a small distance of the house, and not unfrequently in a pear or apple-tree, rarely at a greater height than six or seven feet from the ground. The nest varies a little according to the convenience of collecting suitable materials. Generally it is composed of, first, a quantity of dry twigs and sticks, then withered tops of weeds of the preceding year, intermixed with fine straw, hay, pieces of wool and tow; and, lastly, a thick layer of fine fibrous roots, of a light brown color, lines the whole. The female sits fourteen days, and generally produces two broods in the season, unless robbed of her eggs, in which case she will even build and lay the third time. She is, however, very jealous of her nest, and very apt to forsake it if much disturbed. During the period of incubation, neither

cat, dog, animal, nor man, can approach the nest without being attacked. The cats, in particular, are persecuted whenever they make their appearance, till obliged to retreat. But his whole vengeance is more particularly directed against that mortal enemy of his eggs and young, the black snake. Whenever the insidious approaches of this reptile are discovered, the male darts upon it with the rapidity of an arrow, dexterously eluding its bite and striking it violently and incessantly about the head, where it is very vulnerable. The snake soon becomes sensible of its danger, and seeks to escape; but the intrepid defender of his young redoubles his exertions, and, unless his antagonist be of great magnitude, often succeeds in destroying him. All his pretended powers of fascination avail it nothing against the vengeance of this noble bird. As the snake's strength begins to flag, the mocking-bird seizes and lifts it up partly from the ground, beating it with its wings, and when the business is completed, he returns to the nest of his young, mounts the summit of the bush, and pours forth a torrent of song in token of victory.

The mocking-bird is nine and a half inches long and thirteen across when its wings are spread. Some individuals are, however, larger and some smaller, those of the first hatch being uniformly the largest. The upper parts of the head, neck, and back, are a dark brownish ash, and when new moulted, a fine light gray; the wings and tail are nearly black, the first and second rows of coverts tipped with white; the primary, in some males, are wholly white, in others tinged with brown. The three first primaries are white from their roots as far as their coverts; the white on the next six extends from an inch to one and three fourths further down, descending equally on each side the feather; the tail is cuneiform; the two exterior feathers wholly white, the rest, except the middle ones, tipped with white; the chin is white; sides of the neck, breast, belly, and vent, a brownish white, much purer in wild birds than in those that have been domesticated; iris of the eye, yellowish cream colored, inclining to golden; bill black; the base of the lower mandible whitish; legs and feet

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black and strong. The female much resembles the male, and is only distinguishable by the white of her wings being less pure and broad, and her black feathers having a more rusty hue.

It will be seen from this description, that though the plumage of the mocking-bird is none of the homeliest, it has nothing gaudy or brilliant in it; and, had he nothing else to recommend him, would scarcely entitle him to notice. But his figure is well proportioned and even handsome. The ease, elegance, and rapidity, of his movements, the animation of his eye, and the intelligence he displays in listening and laying up lessons, from almost every species of the feathered creation within his hearing, are really surprising, and mark the peculiarity of his genius. To these qualities may be added that of a voice full, strong, and musical, and capable of almost every modulation, from the clear, mellow tones of the wood-thrush to the savage scream of the bald-eagle. In measure and accent he faithfully follows his originals; in force and sweetness of expression he greatly improves upon them. In his native groves, mounted on the top of a tall bush or half-grown tree, in the dawn of the morning, while the woods are already vocal with a multitude of warblers, his admirable song rises pre-eminent over every competitor. The ear can listen to his music alone, to which that of all the others seems a mere accompaniment. Neither is his strain altogether imitative. His own native notes are bold and full, and varied seemingly beyond all limits. They consist of short expressions of two, three, or, at the most, five or six syllables, generally interspersed with imitations, and all of them uttered with great emphasis and rapidity, and continued with undiminished ardor for half an hour or an hour at a time. His expanded wings and tail, glistening with white, and the buoyant gayety of his action, arresting the eye as his song most irresistibly does the ear, he sweeps round with enthusiastic ecstasy, and mounts and descends as his song swells or dies away. While thus exerting himself, a bystander, destitute of sight, would suppose that the whole feathered tribes had assembled together on a trial of skill, each striving to produce his

utmost effect. He often deceives the sportsman, and sends him in search of birds that are not, perhaps, within miles of him, but whose note he exactly imitates: even birds themselves are frequently imposed upon by this admirable mimic, and are decoyed by the fancied calls of their mates, or dive with precipitation into the depth of thickets at the scream of what they suppose to be the sparrow-hawk.

The mocking-bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog; Cesar starts up, wags his tail, and runs to meet his master. He squeaks out like a hurt chicken, and the hen hurries about with hanging wings and bristled feathers, chuckling to protect its injured brood. The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully; he runs over the quaverings of the canary, and the clear whistlings of the Virginia nightingale, or red-bird, with such superior execution and effect that the mortified songsters feel their own inferiority, and become altogether silent, while he seems to triumph in their defeat by redoubling his exertions.

This excessive fondness for variety, however, in the opinion of some, injures his song. His elevated imitations of the brown thrush are frequently interrupted by the crowing of cocks; and the warblings of the blue-bird, which he exquisitely manages, are mingled with the screaming of swallows or the cackling of hens. Amid the simple melody of the robin, one is suddenly surprised by the shrill reiterations of the whip-poor-will, while the notes of the kildeer, blue-jay, martin, Baltimore, and twenty others, succeed, with such imposing reality, that the auditors look round for the originals, and with astonishment discover that the sole performer in this singular concert is the admirable bird now before us. During this exhibition of his powers, he spreads his wings, expands his tail, and throws him-

self around the cage in all the ecstasy of enthusiasm, seeming not only to sing but to dance, keeping time to the measure of his own music. Both in his native and domesticated state, during the stillness of the night, as soon as the moon rises, he begins his delightful solo, making the whole neighborhood resound with his inimitable medley. The mocking-bird is frequently taken in trap-cages, and, by proper management, may be made sufficiently tame to sing. The usual price of a singing-bird, is from seven to fifteen, and even twenty dollars. Mr. Wilson has known fifty dollars paid for a remarkably fine singer; and one instance where one hundred dollars were refused for a still more extraordinary one. Attempts have been made to induce these charming birds to pair, and rear their young in a state of confinement, and the result has been such as to prove it, by proper management, perfectly practicable.

THE MOMENT OF SUCCESS.



N the fair bowers of paradise, ere the serpent had accomplished his deadly work, or the tree of knowledge yielded its fatal gift, labor and care were unknown. Fruitful nature yielded, unsought, her richest treasures, and the bounties of heaven, gently as its own dew, descended upon man, demanding no return save gratitude and enjoyment. But, when he had passed the precincts of that happy place, for ever closed against him by the flaming sword of the angelic guard, far different were the conditions of his being. In the sweat of his brow was he to eat his bread; with labor, toil, and suffering, was he to purchase all earthly good. Stern as was this decree of the Almighty, mercy was enclosed therein—dark as was the cloud of human destiny, the rainbow of peace and joy was painted upon it. Rest was to be doubly sweet after toil—prosperity more bright after adversity—success more

glorious after obstacles surmounted and difficulties vanquished. True it was, the soft vales of paradise were no longer to be his inheritance, and the bright inhabitants of heaven his familiar guests no more; yet some flowerets of bliss, lovely as those of Eden, were to gladden his exile with their beauty, and still to be to him and his descendants, the sweet teachers in the lessons of happiness. Yes, surely, in this desolate world,

"Some moments are to mortals given,
With less of earth in them than heaven."

Some brief seasons, which fully compensate for years of toil and pain, bringing to the soul an intensity of enjoyment, which makes it conscious of its vast capabilities of happiness, when the fetters of mortality shall be broken. In the arrangements of Infinite Wisdom, such feelings have been decreed to man, as the reward of exertion in the attainment of laudable objects—the laurel crown of well-directed effort. No faculty of our being, exercised in its proper sphere, can fail to bring this promised blessing. And, though all experience in kind this happiness, from the child, who triumphantly sees his tiny house stand secure, to the sovereign, who beholds successfully carried out his vast plans for a nation's welfare, yet the degree must depend on the greatness of that purpose, and the difficulties that have impeded its accomplishment.

Who can know what a moment was that for Columbus, when after years of untiring, ever-baffled effort for the attainment of his favorite object—after a thousand dangers of an unknown ocean, and many a sleepless and anxious night, he saw floating near his vessel a green herb—the joyful herald to his troubled spirit, of the long-sought object of his ardent hopes. And when these joyful anticipations were confirmed by the sight of that lovely island, reposing upon the ocean in all its greenness and beauty, inhabited by an unknown race—perhaps the neighbor of a mighty continent, which was by him to be bequeathed to the world, and become the perpetual monument of his fame, what emotions must have filled his soul! A joy so pure, so deep, so concentrated, as to have outweighed whole years of suffering! What though his childhood had

been spent in the midst of privations and dangers, and the fountains of joy peculiar to that happy season, to him almost unknown? what though the bright dreams of his youthful imagination were indulged in the silence of solitude, finding in no sympathizing breast an answering chord; and the deep yearnings of his enthusiastic nature made known, only to be chilled and repressed by the disapprobation of dull mediocrity? What though his more mature years were marked by disappointment and sorrow, and that agony that a noble mind can so deeply feel, when, conscious of its own greatness, and the loftiness and integrity of its purposes, it finds them unappreciated, or met with indifference or contempt? What though he had left the shores of Spain, amid the jeers and maledictions of the spectators, denounced as a visionary—a mark for the finger of scorn, with a world of dread uncertainty present to his imagination, and none to ask the blessing of Heaven on an enterprise so chimerical, or commend him to that Being, who holds the waters in the hollow of his hand? Was there ever prospect so gloomy—ever circumstances so disheartening? But, in that moment of success—in the realization of all those brilliant hopes of life's fair morning—in the actual possession of the goal, to gain which his whole life had been consecrated to self-denial and suffering, the trials of the past were remembered no more. He was to return to his adopted land in triumph—to see himself an object of applause and admiration, where but late, he had been one of pity and contempt; to be welcomed to the presence of royalty, bearing with him a gift that even majesty would be proud to accept—the gift of a new world.

From Columbus, we turn to another of the sons of genius, one who discovered, not a world, but the secret and invisible chain that binds all worlds—the immortal Newton. We are told by his biographer, that when he perceived that the great law of gravitation—a law whose existence for years he had suspected, and labored to prove, was about to be established beyond a doubt, by his calculations, so deeply was he affected by the grandeur of the discovery, and the astonishing effects resulting from it, that he was obliged to commit to

the firmer hand and cooler judgment of a friend, the completion of what was to give his name to immortality. It was a triumph of intellect, that shook the pillars of the frail tenement, that obstructed its far-seeing vision, and limited its heavenward aspirations. What had he not accomplished? Truly, he had become the high priest of science, and entered within the veil never before lifted to mortal vision! Before him was spread out the illimitable universe, with its systems of worlds, all revolving in their aerial and unwearied journeys, in allegiance to that same simple but grand and beautiful law that brought the apple to the ground. What though, since touched by the hand of Omnipotence, the complicated machinery of the material world, had moved in "solemn silence," it was now compelled, at the mandate of genius, to disclose its secrets, and reveal to mortal ear its harmonies. In that moment of success, he must have felt that his name henceforth was to be linked with the beautiful order of the universe, and his fame written in the heavens.

On the page of history stands another name, more dear to every American heart than that of the discoverer of this vast continent, or the promulgator of nature's hidden laws—our own beloved Washington. In the glorious success that crowned his noble purposes and indefatigable exertions for his country's good, another bright example is left to the aspirant after those imperishable honors, that encircle the brow of him who becomes the benefactor of his race. Do they not bid him, when he feels within him the upspringing of a lofty sentiment—a consciousness of powers that may contribute to the elevation of man, to press on through difficulties and dangers, with duty for his watchword, and the arm of Omnipotence for his defence, till the object is attained—the victory won? And how boundless is the field of laudable ambition! True, in no far distant ocean, may an unknown world be awaiting the approach of genius to give it a name in the annals of time—no grand universal truth, may, at his bidding, stand confessed to the admiration of the world; nor, like Washington, may it be his to bring to a successful issue a great political revolution, and

to be the founder of a republic, whose name is a distinguished star in the constellation of nations. Along these bright paths his destiny may not lead him; yet, let him remember that in the moral and physical world, the cause of truth still calls for champions—that from the great heart of humanity, may still be heard the unceasing groan, extorted by suffering, ignorance, and guilt; that the field of doing good is everywhere ripe unto harvest, and success certain, if the spirit faints not. Nor should he forget that in this struggle for the supremacy of the nobler principles of our nature, the lowest soldier, if he stands his ground, and fearlessly unsheathes his weapon, contributes to the victory, and will share the reward; that every noble thought sent forth from his own soul, will find, like the winged seed, its resting-place, and perchance, nerve some arm more vigorous than his own, or like a wheel within a wheel, set in motion the energies of some spirit, that shall prove to the world a Washington or a Newton. In the noble cause of good to man, surely none should despair, for—

"Lives of great men all remind us,
We can make our lives sublime,
And, departing, leave behind us,
Footsteps on the sands of time.
Let us, then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labor and to wait."

GROTTO OF ADELSBERG.

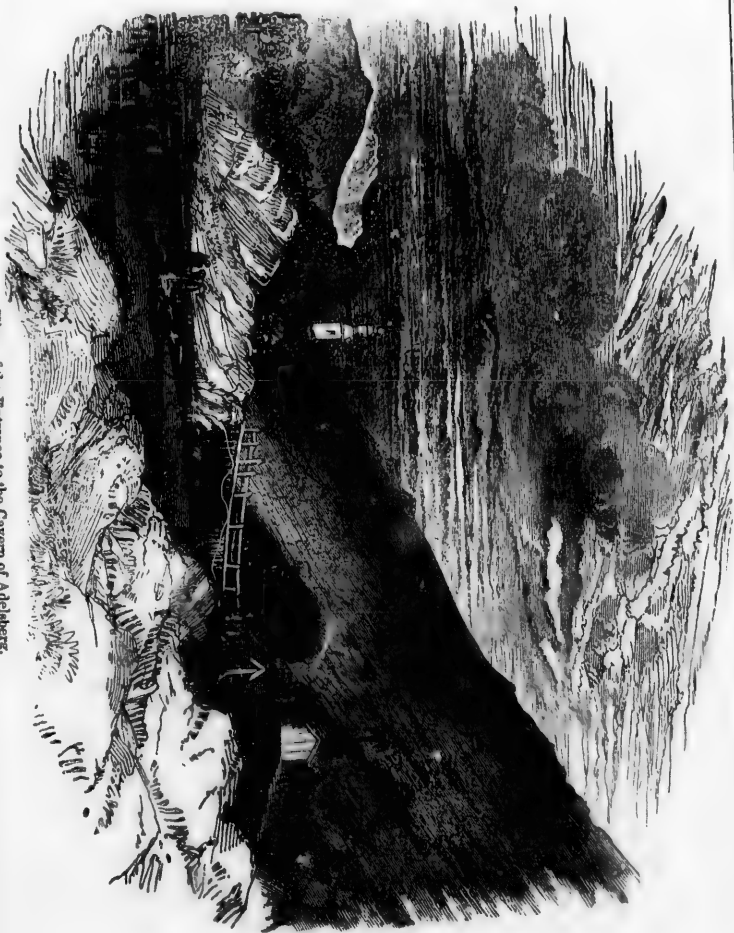


THE circle of Carniola is one of the most interesting portions of the dominions of Austria. Its bare and calcareous mountains are grand and striking, and their geological structure is peculiar. The waters of subterranean rivers issue from their recesses, and the lake of Zirknitz is celebrated on account of the singular fact that at stated times it suddenly becomes dry, its contents being drained into the bowels of the mountains, and after the lapse of a certain period, they again issue into their usual ba-

sin. Adelsberg is situated half-way between Laybach and Trieste, in the district which overhangs the Adriatic, and, as shown in the engraving, is placed at the foot of a considerable eminence. There are two apertures in this eminence, one of which receives the river Poick. One of these openings seems, from its regular appearance, to be the work of art rather than of nature, while the other aperture has none of this regularity, but is broken into jagged shapes. The entrance by which visitors are conducted into these caverns is considerably higher than that by which the river disappears; and the gallery which it forms is divided from the other cavern by a partition, which is broken through in various places, the visitor hearing the waters rushing beneath along their subterraneous bed. This gallery runs but a short way into the mountain, while, "as you advance, the murmurings of the stream and the distant gleams of daylight die away together, and the silence and darkness of ancient night reign around." Such is the entrance to the cavern of Adelsberg; but its recesses can not be penetrated without the assistance of lights. The visitor can then proceed along the passage above described, which gradually widens, until it opens into an immense cavern, or rather there are two caverns, for it is crossed by a ledge of rock, which does not rise to the roof. This ledge forms a natural bridge, on one side of which the waters furiously pursue their course, and further on they have worn a passage through the partition which divides the cavern. The darkness is oppressive and impenetrable, and the lights, which are too feeble to pierce through the obscurity, only render it more striking. The waters rush along with a heavy and indistinct sound. It is only within a comparatively recent period that any one has been so adventurous as to proceed any further than this ledge, as it sinks down precipitously. At the point where the descent is the least abrupt, a flight of steps was cut, the partition was pierced, and steps were cut on the other side, which land the visitor on the floor of the larger cavern. Here the river flows steadily along in a well-indented channel, and it enters the mountain at the opposite wall of the cavern. A wooden

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View of the Entrance to the Cavern of Adelsberg.



bridge is thrown across the river, and the terminating wall of the cavern apparently opposes all further progress. About twenty years ago some individual, by means of the projecting points of rock, reached the top of this wall, which is about forty feet high. His adventurous spirit was rewarded by discovering that the wall was not so high as the roof, and another cavern presented itself. Steps were cut on the opposite side, and beyond this there was found a succession of immense caverns, branching off in two separate series.

The suite of caverns to the left is the more extensive, ample, and majestic, but the one which branches to the right, though smaller, is richer in varied and fantastic forms. They are all different in size and form and ornament, and are connected by passages which are sometimes low and bare, sometimes spacious and lofty, supported by pillars, and fretted with cornices of the purest stalactite. The columns are sometimes uniform in their mass and singularly placed; sometimes they are so regularly arranged, and consist of smaller pillars so nicely clustered together, that one believes he is walking up the nave of a Gothic cathedral. Many of these columns, which are entirely insulated, have a diameter of three, four, and even five feet. Frequently the pillar is interrupted as it were in the middle, losing its columnar form, and twisting, dividing, or spreading itself out into innumerable shapes. Sometimes it dilates into a broad thin plate, almost transparent in the light of a lamp; sometimes this plate curves itself round in a circular form, sometimes the descending part tapers to a point, which rests on the broad surface of the ascending stalagmite. The walls are entirely coated with the substance, and, in the smaller grottoes, it is so pure, that travellers have covered it with names written in pencil, which have already resisted the moisture five or six years. The other division is more spacious, and extends much further. The caverns which compose it are wider and loftier, but not so beautifully adorned as in the other. The enormous clustered columns of stalactite that seem to support the everlasting roof from which they have only originated, often tower to such a height, that the lights

do not enable you to discover their summit; but, though infinitely majestic, they are rougher, darker, and more shapeless than in the smaller suite. The further you advance, the elevations become bolder, the columns more massive, and the forms more diversified, till, after running about six miles into the earth, the scene of wonderment terminates with the element with which it began, water. A small subterraneous lake, deep, clear, cold, and dead-still, prevents all further progress. It has not been passed; it would therefore be too much to say that nothing lies beyond.

One of the most spacious and regular of any of the caverns, of an oval form, about sixty feet long and forty broad, and whose roof is not visible owing to its great height, is used as a ball-room by the peasantry of Adelsberg once a year, on the festival of their patron saint. The floor is smooth; the walls are covered with stalactite, but are otherwise less ornamented than the other caverns; a few natural stone seats and wooden benches constitute the furniture, and candles are lighted in rustic chandeliers, formed of a wooden cross stuck horizontally on the top of a pole. Here, many hundred feet beneath the surface of the earth, and a mile from the light of day, the rude music of the Carniolian resounds through more magnificent halls than were ever built for monarchs. The flame of the uncouth chandeliers is reflected from the stalactite walls in a blaze of ever-changing light. A vast stalactite has formed from the ceiling, having the appearance of the most beautiful alabaster, and the form is that of a most perfectly arranged drapery. The trickling of the water at the edges has thickened them, and given the appearance of an edging or border to the drapery. The substance being semi-transparent, the guides who show the cavern put their torches behind it, in order to display its beauty to the greatest advantage amid the surrounding darkness.

GIGANTIC.—So vast is the Atlantic ocean, that it has been said that all the ships in the world might be so dispersed over it that none would be able to see one another.

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Grotto of the Maddalena, at Adelsberg.

DYSPEPSIA.



DARKLY poetical notion was current among our forefathers, that a person of a morose, unamiable disposition was possessed of a devil. They believed that he was merely the outer casing, the sheep's clothing of a sort of supernatural wolf; that if the visible shell, in the likeness of man, could be removed, there would appear to the terrified visions of the multitude a figure with horns, hoofs, a tail, and the very sharp goad with which it was supposed to prick on its victim to say spiteful things, and to do bad actions. This idea of our forefathers has been proved by anatomy and physiology (of which they knew nothing) to be quite erroneous as far as regards the body; the presence of the evil spirit. Science has robbed us of the horns, the hoofs, and the tail; but it has, with all its poetry-spoiling discoveries, still left us the essential demon. The monster is called by nosologists "dyspepsia," and by the rest of the world indigestion.

Many a snapuish, disagreeable man, who is feared at home as a domestic tyrant, shunned abroad as a social Tartar, and denounced everywhere as the wilful incarnation of ill-temper, is nothing more than the victim of the demon dyspepsia. Perhaps he was in his early years as good-humored and kind a being as ever breathed. Gradually, his friends and relations perceived a change in his disposition. This began, in all probability, by snappishness to his wife, scolding his children, and occasionally kicking his dog. When expostulated with for allowing these causeless improprieties to grow upon him, he is ready enough to own his faults, but at the same time equally ready to make excuses for them. He declares business is going wrong, though you know it never prospered better; or that his children worry him, though it is evident he has terrified them into taciturnity and shrinking obedience. He makes every excuse but the right one; because, poor wretch, he is perfectly ignorant of the real cause. He really be-

lieves what he says, and thinks that he is on the road to the bankrupt court, and that his offspring really are disobedient. Alas! it is one of the characteristics of the insidious demon he is possessed with, to hide itself from the ken of its victim. Even when the monster deranges his bodily health, and drives him to the doctor, he describes every symptom but those which are indicative of the real disease. The skilful physician, however, finds it out in spite of, or rather in consequence of, his mystifications, and proceeds to exorcise the evil spirit—not after the ancient plan with bell, book, and candle—but with pill, draught, and plenty of exercise.

When, therefore, we meet with such a man as we have described, let us be a little charitable. Don't let us denounce him without remorse or mitigation. Pity is the proper sentiment which he should awaken. Human nature is not so innately vicious as some philosophers imagine; instinctively our good impulses predominate, and would remain dominant, were they not so often blunted, checked, and strangled by dyspepsia. Imagine yourself in a dyspeptic condition, and then ask whether you could be amiable to your fellow-creatures, or be able to assume that virtue when you have it not? Fancy yourself in a state which, when asked about it, you are obliged to describe as a something which makes you wretchedly uncomfortable, but you don't know what; a condition which, nevertheless, unfits you for occupation; a feeling which imparts a distressing craving for food, combined with a disgust at the very idea of eating it; a constant drowsiness, without the power of sleeping; a sensation of overwhelming fatigue and weariness, with a longing to take exercise; a weight over the brow, a weight at each joint, a weight at every extremity, and a still greater weight in the stomach. Then as to the state of your nerves: conceive yourself in the lowest of low spirits; in hourly dread of some misfortune; haunted with suspicions regarding your dearest friends; looking upon your whole household as a set of conspirators against your comfort: feeling all this, I say, with a thorough conviction that such sensations mislead you; that in reality no misfortune impends;

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and that your family love you dearly.
Then at night, instead of enjoying the
benefit of your sweet restorer, balmy sleep,"

you are visited by your attendant demon's
terrible ally, nightmare, who inflicts even
greater tortures on you than his daytime
colleague. "In a half-waking or inter-
somnia condition," saith the learned Dr.
Von Druffel of Berlin, "you behold a mon-
ster of some kind—a goblin, a fiery horse,
a wild gigantic man—glide slowly toward
you. This apparition seats itself on the
edge of your stomach, and presses you with
a crushing weight that you can nei-
ther rise nor move a limb." You are
awake; you are sufficiently awake to
realize that could you but move your little
finger the charm would be broken, and the
terrible nightmare gallop away. But you can
not: all power is removed, and there the
imaginary quadruped remains, caprioling
upon your devoted breast, like a heavily-
shod war-horse on parade. Even when
you fall asleep you are no better off. You
have horrid visions. You dream yourself
to be the most detestable villain in exis-
tence. In the short space of an hour's
nap, you inflict tortures on some dear
friend which would have frightened a
Spanish inquisitor. You commit crimes
of unheard-of atrocity, and only escape
the gibbet by waking, the victim of re-
morse and despair.

After enduring all this, picture yourself
seated at breakfast, and though surrounded
with every comfort administered by a most
affectionate household, just say whether
you think it to be within the pale of hu-
man probability that you could look, speak,
or behave pleasantly? If your wife were
to offer you the sincerest sympathy, and
the tenderest condolences, would not the
internal demon "dyspepsia," incite you to
accuse her of "teasing" you? Can you
for a moment believe that, in such a state
of mind and stomach, your expostulation
would be mild and Christian-like, if the
butter were bad, or the egg you had just
broken somewhat too odoriferous? Would
you, if ever so coaxingly asked, hand over
a check for your wife's milliner's bill with-
out grumbling? If you could do all these
things, you are more than mortal.

Let me repeat, therefore, when you hear

an individual denounced as a monster of
ill-humor, do not be too harsh upon his
moral character, before you have inquired
into his physical symptoms. Many a man
who is accused of having a bad heart,
ought rather to be described as having a
bad stomach, for the immense influence
which that organ exercises over the world-
ly conduct of mankind is greatly over-
looked. A female patient of the celebra-
ted French physician Pinel, who was ful-
ly possessed with the demon dyspepsia,
and knew it, thus details her condition:—
"The foundation of all my misfortunes is
in my stomach. It is so sensitive, that
pain, grief, pleasure, and, in a word, all
sorts of moral affections, seem to take
their origin in it. Even a frown from a
friend wounds me so sensibly, that my
whole system is disagreeably affected by
it; I think by means of my stomach, if
I may be allowed so to express myself."
How many apparently evil-disposed per-
sons whom one meets with may be pre-
cisely in this lady's condition, and think
and act from the dictates of the stomach,
or rather from those of the demon con-
tained in it—dyspepsia! How frequently,
therefore, may not our judgment err in the
matter of first causes, regarding petty
cruelties and small tyrannies? When, for
example, a rich debtor refuses a poor cred-
itor a long-deferred payment, may not this
piece of injustice be the result, not so
much of sheer dishonesty, as of deranged
digestive organs? May we not attribute
it less to a defect in the moral sentiments,
than to evil influences diffused over his
nervous system by a piece of undigested
pigeon-pie? I knew a whole family
whose happiness seemed to depend upon
what the head of it ate for dinner. His
dietary was watched, especially by the
younger branches, with incessant anxiety.
After mutton-chops and boiled rice, they
could—provided he abstained from pud-
ding—coax papa out of anything. Boiled
beef boded evil; and in that case they
cared very little to come in as usual to
take their share of dessert. When lob-
ster-salad had been partaken of, they crept
about the house like mice, and kept as
much as possible out of papa's way. Du-
ring his paroxysms of ill-humor, reason-
ing was vain; neither the expostulations

of his brother the rector, nor the kind entreaties of a wife whom he devotedly loved, were effectual in restraining his tetchy ebullitions of spleen. The demon within grew daily more influential, till he began to be shunned by his friends. No good effect was produced even by that. At length a medical adviser was consulted respecting his cadaverous appearance and certain pains which "shot" across the shoulders. The doctor ordered him to Cheltenham, placed him on a strict regimen, enjoined frequent visits to the pump-room, and in three months our friend returned, to all appearance an angel of good temper. The banished roses returned to his cheeks—he felt strong and hearty, and never spoke a cross word. His meals were no longer watched, for the juveniles found him ever kind and complying, no matter what was for dinner. It was, however, observed that he ate much more sparingly than formerly, and never would allow such a thing as a round of salt beef or a lobster to enter his door.

It is not too much to affirm, that half the crimes to which human frailty is liable are concocted in the stomach. The poor are incited to mischief by the cravings of their digestive organs for something to do; while the rich are often impelled to wrong, because they give their digestive powers more than they can do. If the former could keep fuller stomachs, and the latter emptier ones, there would assuredly be fewer evil deeds in the world than are perpetrated at present.

POWER OF THE VOICE OVER CHILDREN.

It is usual to attempt the management of children either by corporeal punishment, or by rewards addressed to the senses, or by words alone. There is one other means of government, the power and importance of which are seldom regarded—I refer to the human voice. A blow may be inflicted on a child, accompanied by words so uttered as to counteract entirely its intended effect; or the parent may use language, in the correction of the child, not objectionable in itself, yet

spoken in a tone which more than defeats its influence. Let any one endeavor to recall the image of a fond mother long since at rest in heaven. Her sweet smile and ever clear countenance are brought vividly to recollection; and so also is her voice, and blessed is that parent who is endowed with a pleasing utterance. What is it which lulls the infant to repose? It is no array of mere words. There is no charm to the untaught one in letters, syllables, and sentences. It is the sound which strikes its little ear that soothes and composes it to sleep. A few notes, however unskillfully arranged, if uttered in a soft tone, are found to possess a magic influence. Think we, that this influence is confined to the cradle? No; it is diffused over every age, and ceases not while the child is under the parental roof. In the pressure of duty, we are tempted to utter ourselves hastily to our children. Perhaps a threat is expressed in a loud and irritating tone; instead of allaying the passions of the child, it serves directly to increase them. Every fretful expression awakens in him the same spirit which produced it. So does a pleasant voice call up agreeable feelings. Whatever disposition, therefore, we would encourage in a child, the same we should manifest in the tone in which we address them.

THE REGALIA OF THE BRITISH CROWN.



HE regalia, deposited in a room recently appropriated to that purpose, presents a magnificent spectacle. Here is the ancient imperial crown of Charles II.; prince of Wales' crown, the ancient queen's crown, but the most magnificent display of England's regalia is the crown of her present majesty. The cap is of purple velvet, with silver hoops covered with diamonds; on the top of these hoops is a ball covered with smaller diamonds, with

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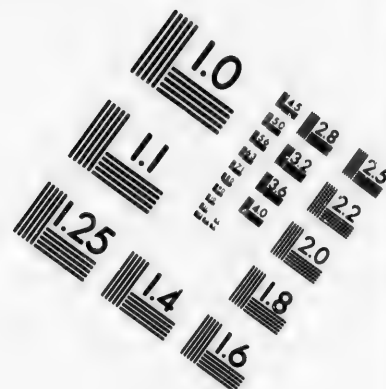
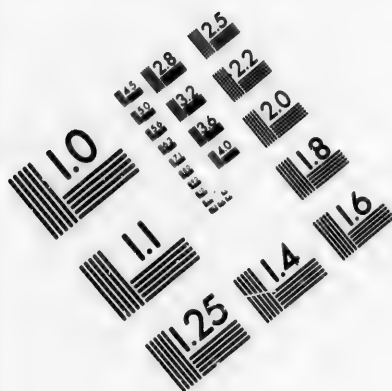
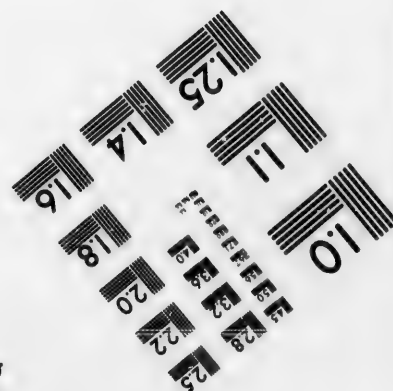
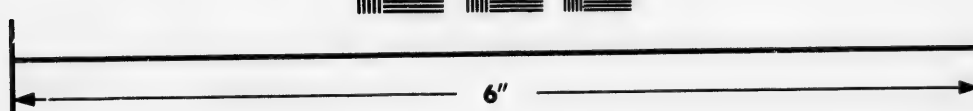
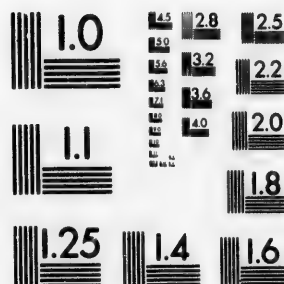


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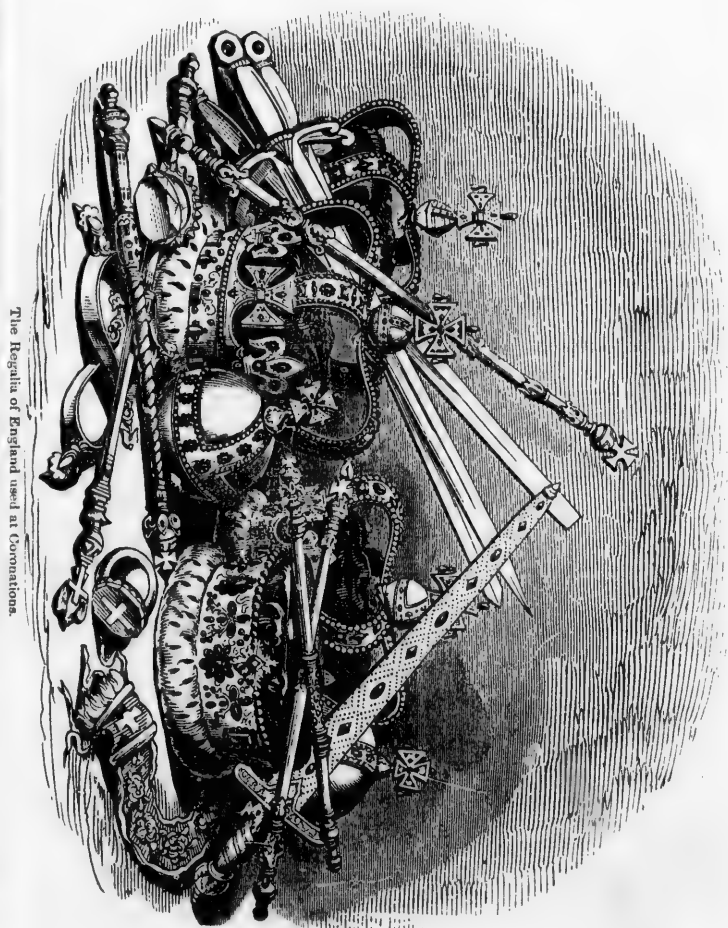
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The Regalia of England used at Coronations.

a cross of brilliants, containing a remarkable central sapphire. On the front is a heart-shaped ruby, said to have been worn by Edward the black prince. This diamond weighs one and three fourths pounds, and is valued at one million pounds. The baptismal font with stand of silver gilt, which was used at the baptism of her present majesty, and the prince of Wales, is four feet high, and cost forty thousand pounds (two hundred thousand dollars). A large silver wine fountain is also exhibited, weighing ninety-six pounds, and which cost fifty thousand dollars. There are various other costly paraphernalia belonging to the regalia, such as St. Edward's staff, of pure gold, four feet seven inches in length; the royal sceptre, of gold, two feet nine inches long, the rod of equity, of gold, three feet seven inches long, the queen's ivory sceptre, mounted in gold, with a dove of white onyx; the orb, five inches in diameter, edged with pearls, and surmounted with roses of diamonds. The sovereign holds this orb in the left hand at the coronation; the swords of Justice, temporal and ecclesiastical; and numerous other articles which we can not mention. The value of the whole regalia is estimated at three millions of pounds equal to fourteen millions five hundred and twenty thousand dollars!

The regalia represented in the group in our engraving, exhibits not only the regalia, properly so called, but also those which are used when a queen consort is crowned. The reader will please to bear in recollection the difference between a queen regnant, and a queen consort. A queen regnant occupies the kingly office, as of right. She is *the* king, and is called queen as being a female. But a queen consort is called queen, as being the wife of the king, and her only right (if right it can be called) to be crowned lies in the will and pleasure of her husband.

The regalia, properly so called, are represented grouped on the left side of the engraving. The two crowns are the crown of state and the imperial crown. The imperial crown is also called St. Edward's crown, as having been made for the coronation of Charles II. to supply the place of the old crown (which bore the name of Edward the confessor) destroyed, along

with the other ancient regalia by order of parliament. The imperial crown is "the crown royal, which is set upon the king's head;" the crown of state is for the accommodation of the king, to be worn in procession. The crown of state was made for the coronation of George IV., the old one having been broken up. A new crown of state has been made for the present queen, which contains all the jewels of the former crown, with many additional ones.

Four swords are used at a coronation. The sword of state, sheathed in its ornamented scabbard, and the three swords of mercy and of justice. The sword of mercy is Curtana, or the pointless sword; the sword of spiritual justice is obtusely pointed; but the sword of justice of the temporality is acutely pointed. St. Edward's staff is represented as crossing the imperial crown; it is a large golden rod, with a mound and cross at the top, and is carried before the king in the procession to the coronation. The sceptre and the virge, or rod, are represented crossed in the foreground of the engraving. The sceptre, surmounted by a mound and cross, is placed in the king's right hand; and the virge, or rod, surmounted by a cross and dove, is placed in the left hand. The globe, or orb, surmounted by a cross, is supposed to have been used originally as a type or emblem of sovereignty. The other portions of the regalia are the spurs, of fine gold, curiously wrought, the ring, and the armil, or armilla, which is used in the ceremony of investiture.

That portion of the regalia which is used when a queen consort is crowned, consists of a crown of state, a circlet of gold, an orb, similar to the king's sceptres, and a ring. They are grouped on the right side of the engraving, the sword of state crossing them.

KING.—The word "king," is of Teutonic or German origin, and is very generally stated by etymologists to be derived from the same root as "cunning," used in its old signification of skill or capacity. The title of *cuning*, *cynig*, *cyng*, and now "king," was bestowed by consent and acclamation on the bold leader who showed his capacity for the post.

MARCH.



ARCH, named so by Romulus, from the heathen deity, Mars, by the Saxons, *Length-Moneth*, because, in this month, the days begin in length

to exceed the nights. The sun has now acquired so much power, that on a clear day we often feel all the genial influence of spring, though the naked shrubs and trees still give the landscape the comfortless appearance of winter. But soft, pleasant weather, in the month of March, is seldom of long duration.

As soon as a few dry days have made the land fit for working, the farmer goes to the plough; and, if the fair weather continue, proceeds to sowing oats and barley; though this business is seldom finished till the next month. The importance of a dry season for getting the seed early and favorably into the ground, is expressed in the old proverb,

"A bushel of March dust is worth a king's ransom."

The mellow note of the thrush, who sings perched on the naked bough of some lofty tree, is heard from the beginning of the month: at the same time, the ring-dove coos in the woods. The lesser white throat, and the chaff-chaff, arrive toward the end of the month. The rookery is now all in motion, with the pleasing labor of building and repairing nests; and highly amusing it is, to observe the tricks and artifices of the thievish tribe, some to defend, and others to plunder, the materials of their new habitations. These birds are accused of doing much injury to the farmer, by plucking up the young corn, and other springing vegetables; but some think this mischief fully repaid by their diligence in picking up the grubs of various insects, which, if suffered to grow to maturity, would occasion much greater damage. For this purpose, they are frequently seen following the plough, or settling in flocks on newly-turned-up lands.

"Rooks," says an intelligent observer of nature, "appear to have a language

among themselves, which is understood by the whole community; and a peculiar note, from a bird set to watch and warn them of approaching danger, is quite sufficient to make them take flight, and always in an opposite direction to that from which the danger is apprehended."

Frogs, which during winter lie in a torpid state at the bottoms of ponds or ditches, are enlivened by the warmth of spring, and early in this month rise to the surface of the water in vast numbers. They are at first very timorous, and dive to the bottom with great quickness as one approaches; but in the coupling season they become bolder, and make themselves heard to a great distance by their croaking.

Those most elegant fish, smelts or sparlings, begin to run up the rivers in this month, in order to spawn. They are of so tender a nature, that the least mixture of snow water in the river will drive them back again to the sea. But nothing in the animal creation is a more pleasing spectacle, than the sporting of the young lambs, most of which are yeanned during this month, and are trusted abroad when the weather is tolerably mild.

Another most agreeable token of the arrival of spring is, that the bees begin to venture out of their hives about the middle of this month. As their food is the honey-like nectar found in the tubes of flowers, their coming abroad is a certain sign that flowers are now to be met with. No creature seems possessed of a greater power of foreseeing the state of the weather; so that their appearance in the morning may be reckoned a sure token of a fair day.

"My bees," says Mr. Jesse, "are a constant source of amusement to me; and the more I study them, the more I am led to admire their sagacity. Few things, however, surprise me more, than the power which they possess of communicating what I can only call intelligence to each other. This I observe to be almost invariably the case before they swarm. Some scouts may then be observed to leave the hive, and for sometime to hover round a particular bush, or branch of a tree; after which, they return to the hive. In a little while, the new swarm quits it and set-

tles on the branch which had been previously fixed upon by the scouts. The same power of communication may be observed in the ant. I have often put a small green caterpillar near an ant's nest; you may see it immediately seized by one of the ants, which, after several ineffectual efforts to drag it to its nest, will quit it, go up to another ant, and they will appear to hold a conversation together by means of their antennæ, after which they will return together to the caterpillar, and, by their united efforts, drag it where they wish to deposit it.

"Each crawling insect holds a rank important in the plan of Him who framed this scale of beings."

In the latter part of this month, the equinox happens, when day and night are of an equal length all over the globe; or rather, when the sun is an equal time above and below the horizon; for the morning and evening twilight make apparent day considerably longer than night. This takes place again in September. The first is called the vernal, the latter the autumnal equinox. At these times, storms and tempests are particularly frequent, whence they have always been the terror of mariners. March winds are boisterous and vehement to a proverb.

VISIONS OF GOOD MEN.

How many beautiful visions pass before the mind in a single day, when the reins are thrown loose, and fancy feels no restraints! How curious, interesting, and instructive, would be the history of a single mind for a day! How many imaginary joys, how many airy castles, pass before it, which a single jostle of this rough world at once destroys! Who is there of my readers who has not imagined summers fairer than ever bloomed, scenery in nature more perfect than was ever combined by the pencil, abodes more beautiful than were ever bestowed, homes more peaceful than were ever enjoyed, companions more angelic than ever walked this earth, and bliss more complete, and joys more thrilling, than were ever allotted to man? You may call these the dreams of

the imagination, but they are common to the student. The man who lives for this world alone, these visions of bliss, poor as they are, are all that ever come. But good men have their anticipations—not the paintings of fancy, but the realities which faith discovers. Good men have the most vivid conceptions. Witness those of old. As they look down the vale of time, they see a star arise, the everlasting hills do bow, the valleys are raised, and the moon puts on the brightness of the sun. The deserts and the dry places gush with waters. Nature pauses. The serpent forgets his fangs; the lion and the lamb sleep side by side, and the hand of the child is on the mane of the tiger. Nations gaze till they forget the murderous work of war, and the garments rolled in blood. The whole earth is enlightened, and the star shines on till it brings in everlasting day. Here are glowing conceptions, but they are not the work of a depraved imagination. They will be all realized. Sin and death will long walk hand in hand on this earth, and their footsteps will not be entirely blotted out till the fires of the last day have melted the globe. But the head of the one is already bruised, and the sting is already taken from the other. They may long roar, but they walk in chains, and the eye of faith sees the hand that holds the chains. But we have visions still brighter. We look for new heavens and a new earth wherein dwelleth righteousness, where no sin will mar the beauty, no sorrow diminish the joy, no anxiety corrode the heart, or cloud the brow.

CHAMOIS HUNTING.



THE chamois hunter sets out upon his expedition of fatigue and danger generally in the night. His object is to find himself at the break of day, in the most elevated pastures, where the chamois comes to feed before the flocks shall have arrived

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Hunting the Chamois.



there. The chamois feeds only at morning and evening. When the hunter has nearly reached the spot where he expects to find his prey, he reconnoitres with a telescope. If he finds not the chamois, he mounts still higher; but if he discovers him, he endeavors to climb above him and get nearer, by passing round some ravine, or gliding behind some eminence or rock. When he is near enough to distinguish the horns of the animal (which are small, round, pointed, and bent backward like a hook, as in our engraving), he rests his rifle upon a rock, and takes his aim with great coolness. He rarely misses. This rifle is often double-barrelled. If the chamois falls, he runs to his prey, makes sure of him by cutting the ham-strings, and applies himself to consider by what way he may best regain his village. If the route is very difficult, he contents himself with skinning the chamois; but if the way is at all practicable with a load, he throws the animal over his shoulder, and bears it home to his family, undaunted by the distance he has to go, and the precipices he has to cross.

But when, as is more frequently the case, the vigilant animal perceives the hunter, he flies with the greatest swiftness into the glaciers, leaping with incredible speed over the frozen snows and pointed rocks. It is particularly difficult to approach the chamois when there are many together. While the herd graze, one of them is planted as a sentinel on the point of some rock, which commands all the avenues of their pasturage; and when he perceives an object of alarm, he makes a sharp, hissing noise, at the sound of which all the rest run toward him, to judge for themselves of the nature of the danger. If they discover a beast of prey or a hunter, the most experienced puts himself at their head, and they bound along, one after the other, into the most inaccessible places.

It is then that the labors of the hunter commence; for then, carried away by the excitement, he knows no danger. He crosses the snows, without thinking of the precipices which they may cover; he plunges into the most dangerous passes of the mountains—he climbs up, he leaps from rock to rock, without considering

how he can return. The night often finds him in the heat of the pursuit; but he does not give up for this obstacle. He considers that the chamois will stop during the darkness as well as himself, and that on the morrow he may again reach them. He passes then the night, not at the foot of a tree, nor in a cave covered with verdure, as the hunter of the plain does, but upon a naked rock, or upon a heap of rough stones, without any sort of shelter. He is alone, without fire, without light; but he takes from his bag a bit of cheese, and some of the barley-bread, which is his ordinary food—bread so hard that he is obliged to break it between two stones, or to cleave it with the axe which he always carries with him to cut steps which shall serve for his ladder up the rocks of ice. His frugal meal being soon ended, he puts a stone under his head, and is presently asleep, dreaming of the way the chamois has taken. He is awakened by the freshness of the morning air; he rises, pierced through with cold; he measures with his eye the precipices he must yet climb to reach the chamois; he drinks a little brandy (of which he always carries a small provision), throws his bag across his shoulder, and again rushes forward to encounter new dangers. These daring and persevering hunters remain whole days in the dreariest solitudes of the glaciers of Chamouni; and during this time, their families, and, above all, their unhappy wives, feel the keenest alarm for their safety.

THE MISSISSIPPI AND THE NILE.



Y the Greeks the space included within the mouths of the Nile, was called the Delta, from its resemblance to the letter (Δ) of that name. This space embraced all of that part of Egypt, from the site of ancient Memphis, or modern Cairo, to the Mediterranean sea. It was the great alluvial formation of the

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Nile. It constitutes a triangle, nearly equilateral, the sides of which average about eighty miles. The whole great valley of the Nile is about nine hundred miles long, and, on an average, about six miles broad. Within this narrow space all that once was great in the world was centred. It was the kingdom of Egypt—the fountain of civilization—the mistress of the civilized world. We read of the glories of Thebes and Memphis with incredulity. Their hundred brazen gates, and the sixty thousand armed men which could at all times issue from them, though they are facts related by grave historians, from Herodotus downward, seriously tax our powers of belief. But when we remember that the chosen people of Heaven were but a race of uneducated shepherds when Egypt was a powerful, enlightened kingdom—when we gaze upon the heaven-reared, eternal pyramids, and explore the vast excavated temples—the builders of which are not known, and the date of which can not be fixed, we must acknowledge that this little river, this narrow valley, shows to mankind what man can do. To Egypt we trace all civilization; from the Egyptians we must confess that we have derived most of the arts of life. Her early history is veiled in obscurity, but her monuments stand, and will for ever, the admiration and the wonder of mankind.

The valley of the Nile, and that of the Mississippi, have often been compared, but save in their fertility, wherein do they resemble each other? The one is a long narrow strip of land, skirted by sandy deserts, depending for its yearly capacity to supply human wants upon the rise of the river—the other extends in length more than fourteen hundred miles, and in breadth from the Alleghanies to the Rocky mountains, and embraces a soil of inherent and perpetual fertility; the one is watered by a single river, without branches or tributaries; the other possesses more than eight thousand miles of navigable streams. If the people who heretofore inhabited the valley of the Nile, could construct works so stupendous, and exercise upon all succeeding time an influence so remarkable—who can say what shall be the destiny of the citizens of this great valley of the "father of waters"? What

is not in their power? who can imagine the strength which they will wield, or the glories they will achieve?

When the great Alexander had conquered the world, he was desirous of leaving to posterity some record of his fame. The shattered walls, the ruined temples, and the falling columns of the cities which he had destroyed, must shortly disappear. He wished to impress his name upon a living and enduring monument. He had the world in which to select its site, and he chose the Delta of the Nile. The city of Alexandria was at once a testimony to his power and his sagacity. Connected by a canal with the western opening of the Nile, it commanded the whole commerce of the valley—its galleys covered the Mediterranean, and a thousand caravans, traversing the deserts of Asia and Africa, poured into it the untold wealth of those extensive regions. For years it was the first city of the world; and after ages of wars, domestic revolutions, and foreign plunder, it is said that at its final conquest by the lieutenant of the calif Omar, it contained a population of 600,000.

If such was Alexandria, the capital of Egypt, the emporium of the valley of the Nile, what may not New Orleans, the natural outlet of our great valley, become? We are not dependent on caravans, traversing the deserts; we are not bounded by the narrow limits of the Mediterranean; we have not for our sole support 6,000 square miles of territory; we are not ground down by a tyrannical government; how far, then, must we surpass the proud city of Egypt in her palmiest days! What the Atlantic and Pacific are to the Mediterranean, what the Mississippi is to the Nile, what steamships are to two-banked galleys, must this emporium be to Alexandria. The prospect before us is indeed bright and cheering. The full accomplishment of the most sanguine hopes depend only upon ourselves. Nature has done everything that is necessary—it only remains for man to do his share.

MAXIMS.—Persevere against discouragements. Employ leisure in study, and always have some work in hand. Be punctual and methodical in business, and never procrastinate.

THE PATHWAY OF SCIENCE.



WE have been reading of the wonderful properties of the electro-magnetic telegraph, and it has set our fancy afloat in the wide field of speculation. The mind soars upward and onward, awakened in all its energies, struggling, grasping, expanding, with the magnificent conceptions which are awakened in the pathway and the progress of science!

Science? what is it? where was it engendered? What are its achievements, and what are the limits which God has ascribed to its astounding developments? Did it belong to antiquity, or is it ours? Science! In the academy, in the lyceum, or the porch at Athens, shall we search for it? Will we go to the dark ages to trace its foot-prints? Those ages, with their "wonderful" and "illuminated" doctors, and their magnificent creeds. Ages which brought the hoary-headed Galileo, before the solemn convocation of the wise and learned, to pronounce upon him, through seven grave cardinals, the anathema of the church—"That to maintain the sun to be immovable and without local motion in the centre of the world, is an absurd proposition, false in philosophy, heretical in religion, and contrary to the testimony of the scripture; that it is equally false and absurd in philosophy to assert that the earth is not immovable in the centre of the world, and, considered theologically, equally erroneous and heretical!" The dark ages, with Copernicus imprisoned by the pope to recant his "absurd dogmas"—with Faustus flying from Paris after his fatal bibles had been exposed for sale—the dark ages with the ponderous tomes of Thomas Aquinas, Abelard Duns Scotus, and Peter Lombard, piled up on groaning shelves—the science of the dark ages! We come to the Baconian era. Bacon, the genius of inductive science, is born. He defines its lines and teaches its limits. His pathway is upward—amazing truths—amazing developments!

"Earth's disemboweled! measured are the skies!
Stars are detected in the deep recess!
Creation widens! vanquished nature yields,
Her secrets are extorted! art prevails;
What monument of genius, spirit, power!"

Science has been manifesting God
Where is God in nature? The illiterate and the savage see him in the whirlwind and the storm, but in ten thousand beautiful combinations is he revealed to the scientific. The earthquake causing mountains to totter on their bases, ocean to heave her immense volumes in august majesty to the sky, and bare her profound caverns—the earthquake thundering rivers from their channels, rocking down cities, and swallowing them up in yawning abysses—these are God to trembling man universally revealed—God in his might, in his awful magnificence! But, oh, to a few only is he in the soft beauty of the landscape, the meandering stream, the rippling fountain, the cascade, the zephyr bearing on its wings Flora's balmy fragrance, the blade of grass, the pebble, the shell—God the kind and attentive parent, God the benefactor, the friend, ministering with equal hand to the great family of living existence.

*Take up the book of astronomy—*Go with the astronomer and contemplate the illimitable empire of worlds, and, like Newton, overpowered to trace the great law that connects them together. Examine your own earth, if you please. See it selecting with mathematical precision the only permanent axis out of an infinity of others on which it might have revolved. Observe the position of that axis too—perpendicular or parallel to the ecliptic, where would have been the seasons and animal life? What else would have reigned throughout this wide domain but solitude? dreary, dreadful, interminable solitude! The poet was not over-enthusiastic when he exclaimed—

"An undevout astronomer is mad!"

Contemplate with the chymist the great law of definite proportions without emotion. Trace the polarization of light, the magnet, electricity's subtile and powerful fluid pervading nature—see with the mineralogist the regular-formed and polished crystals which the great Architect has fashioned—the earth unbowed to the

geologist, its mighty mountains penetrated to trace their structure and arrangements—its fossils sought out and interpreted in evidence of rolling thousands and thousands of ages! Examine with the botanist and the anatomist organic sensibility and organic insensible nature. Everywhere and everything excites an intensity of emotion! All is great, all is wonderful, all is inexplicable! Or if mental philosophy be admitted to the dignity of science, the single discovery that the laws of association which influence memory are in themselves indestructible—that an affection of the body stimulates their action—that submitted to certain modifications the whole train of past thoughts, feelings, and affections, which now seem shrouded in the dark vista of the past, may be completely developed so that no one item of life shall be lost. This fact, if clearly established, completes the dignity of the effect, man, and the cause, God, and is a field for the exercise of deep and profound thought.

GREENWICH OBSERVATORY.



It stands on the most elevated spot in Greenwich park, and consists of two buildings, one a low oblong edifice, which is properly the observatory, and the other a house for the astronomer royal. The upper part of the latter, however, besides serving as a library-room, is also filled with instruments; and there is a camera-obscura on the top of the house. The library contains many scarce and valuable works, principally on scientific subjects. The observatory is divided into four apartments, fitted up with transit circles, quadrants, clocks, sectors, and other astronomical instruments. Among them

is an instrument for observing the passage of the different heavenly bodies over the meridian, of eight feet in length, which is famous as having been that used by Halley, Bradley, and Maskelyne. Bradley's zenith sector is also in one of the rooms, with which he made the observations at Kew, from which he deduced his discoveries of the aberration of light and the mutation of the earth's axis. Two small buildings, with hemispherical sliding domes, stand to the north of the observatory, which are fitted up chiefly for the observation of comets. Most of the old observatories were provided with a deep well, from the bottom of which the stars might be observed in the daytime; and that of Greenwich had also formerly an excavation of this kind, descending to the depth of a hundred feet, in the southeast corner of the garden. It is now, however, arched over.

Greenwich observatory stands on the site of an old fortified tower belonging to the British crown, said to have been first erected in the early part of the fifteenth century, by Humphrey, Duke of Gloucester, the brother of Henry V., one of the earliest patrons of learning in that country. It was either repaired or rebuilt by Henry VIII. in 1526; and continued long afterward to be considered a place of some strength. Paul Hentzner, the German traveller, says that, in the time of Elizabeth, it was known by the name of "Mire-fleur," and was supposed to be the same which is mentioned in the romance of "Amadis de Gaul."

The foundation-stone of the building was laid on the tenth of August, 1675. Flamsteed was appointed the first superintendent of the establishment, under the title of astronomer royal; and he commenced his observations in August of the following year. This great astronomer continued to reside at the observatory till his death, on the thirty-first of December, 1719, forty-three years after his appointment. The results of his laborious observations and calculations during the whole of this period were given to the world in 1725, in three volumes folio, under the title of "Historia Celestis," an immortal monument of his industry and genius. Flamsteed was succeeded as as-



View of the Observatory at Greenwich, England.

tronomer royal by the great Halley, who occupied the situation twenty-three years, having died in 1742, at the age of eighty-five. His successor was another most distinguished astronomer, Bradley, the discoverer of the aberration of light, or that difference between the apparent and the true place of any of the fixed stars, which is occasioned by the motion of the earth and the motion of light from the star to the observer. After Bradley's death, which took place in 1762, Mr. Bliss held the office for two years, when he died, and gave place to the late eminent Dr. Maskelyne, who enjoyed it for a period not much short of half a century, having survived till 1810. He was succeeded by the present astronomer royal, Mr. Pond. Since 1767, the observations made by the astronomer royal at Greenwich have been annually published, under the superintendence of the royal society. The admirable instruments with which the observatory is provided, together with the ability and high character of the successive astronomers, have secured to the Greenwich observations a reputation for accuracy scarcely rivalled by those of any other similar institutions.

REPRODUCTION OF PLANTS.



THE main object of a plant during growth seems to be the reproduction of its kind. Whether the term of its existence be limited by a day, by a year, or by centuries, its sole effort—as it proceeds from leaf to stem, from stem to branch, and from branch to flower and fruit—is the multiplication of itself. This is effected variously; by seeds, by spores or germs, by tubers, by runners, which put forth shoots as they elongate, by branches which send down roots, by slips or detached branches, or even by single leaves. We shall notice the more remarkable of these modes as exhibiting at once the perfection of design, and the inexhaustible contrivances

which nature has ever at her adoption for the accomplishment of the end in view.

Increase by seed is the most familiar mode of reproduction, being common to all flowering plants. Seeds are merely leaves preserved in peculiar envelopes till the return of the season of growth. And here it may be remarked, that wherever we have a healthy-growing leaf, or number of leaves, there is no difficulty in rearing an independent plant, since, according to the doctrines of morphology, the leaf is the primary organ from which all other parts take their form and development. A numerous class of vegetables have their seeds composed of two leaves or lobes, as may be seen in the bean and apple; in another class, as the oat and cocoa-nut, they consist of a single lobe. But whether they have one or two lobes, in all of them the function of reproduction is of the most perfect description. To produce a fertile seed, the pollen or dusty granules which tip the stigmas must be conveyed to the pistil, and through the pistil to the embryo in the ovary. For this purpose a thousand beautiful adaptations have been called into existence. These precious granules, liable to be swept away by every breeze and shower, are protected by the sheltering calyx and corolla, which turn their backs to the wind, or droop like a pent-house to ward off the rain. And even should the pollen be scattered by accident, the pistil is covered with a fine mucilage, which intercepts and retains it in spite of every antagonist force. Some plants have the stamens and pistils in one and the same flower; in others the stigmas are in one flower and the pistil in another; while in not a few the male and female flowers are produced on separate stems—yet in all, the means of fertilization are seldom rendered nugatory. If the male and female flower are near, they are placed to be brought in contact by the slightest waving of a branch; or if distant, the passing breeze and the limbs of the wandering bee, are the agents by which the pollen is carried to the destined receptacle. When properly matured, a seed must be provided, first, with the means of dispersion and preservation, and secondly, with a sufficiency of internal nourishment for the embryo plant, till its roots

have struck into the soil, and its leaves have expanded in the atmosphere. Accordingly, some seeds are farinaceous, others albuminous, and many oleaginous—all of those products being converted, during germination, into those elements which enter into the structure of a growing plant. For the conversion of these products, a certain amount of heat and moisture is necessary; but too much heat would parch them, and too much cold or moisture would destroy their vitality. To provide against such contingencies, nature has conferred on the seeds of plants the most ingenious and perfect coverings. The cocoa has a tough fibrous coir and woody nut, impervious alike to draught and rain; the chest-nut has a compact leathery envelope; the plum a hard stony drupe; the apple a fleshy pome, enclosing leathery cells; the rose a flesh hip, packed with down; the pea and bean a pod of parchment; and seeds apparently naked have either a coriaceous membrane, or have the exterior tissue so condensed that they look as if they had come from the hand of a japaner. Thus, the protection against cold, drought, moisture, and other destructive agencies, is so complete, that seeds which have been buried for centuries, have, on being brought to the surface sprung up into healthy plants; even a crop of wheat has been reared from grain found in the case of an Egyptian mummy more than three thousand years old.

Equally perfect with this protection is the means for their dispersion over the surface of the globe. What could be better adapted for floating from island to island than the cocoa-nut, with its light, waterproof, fibrous coir, and woody shell? What more easily caught up by the slightest breath of air than the seeds of the thistle or dandelion, with their little parachutes of down? Or what more aptly fitted for attachment to the coats of wandering animals, than the hooked heads of the teasel and burdock? Nor does contrivance end here. Many when ripe, are ejected from the vessels which contain them with considerable force by means of elastic valves and springs. The cardamine impatient throws its ripe seed to a distance on being touched; so does the squirting cucumber, the geranium, the

common broom, and others, as if they were endowed with vitality, and had a care for their embryo progeny. Some do not even part with their seeds till these have struck root as independent plants. Thus the mangrove, which flourishes amid the mud of tropical deltas and creeks, retains its berries till they have sent down long thread-like radicles into the silt below, as if it felt that the water and slime by which it was surrounded were elements too unstable to be intrusted with its offspring.

Plants that reproduce themselves by spores or germs, belong to the cryptogamic or flowerless class of vegetation, as the ferns, sea-weeds, mosses, mushrooms. In many of these the reproductive spores are so minute, that they float in the air unseen; and not a dried mushroom or puff-ball that is struck by the wandering foot, but disperses thousands of its kind around it. The little brown specks on the leaf of the fern, the snuff-like powder of the puff-ball, or the dust arising from the mould of a decayed cheese, are all alike the germs of future plants; and when we consider how minute each individual is, how liable to be borne about by winds, by water, and by the coverings of animals, to which they may adhere, we shall cease to wonder at the fact, that there is not a portion of surface, organic, or inorganic, that may not be covered with their growth. The spores of the fuci, or sea-weeds, which are always surrounded by water, and covered with a mucilage that enables them to adhere to whatever solid body they touch; and, what is peculiar in this adhesive substance, it is insoluble in water. "Let chymistry," say McCulloch, in his "Illustrations of the Attributes of a God," "name another mucilage, another substance, which water can not dissolve, though apparently already in solution with water, and then ask if this extraordinary secretion was not designed for the special end attained? and whether, also, it does not afford an example of that Power which has only to will that it may produce what it desires, even by means the most improbable?"

Many plants, as the potato, reproduce themselves by both seed and tubers. Both modes, however, do not take place with equal exuberance at one and the same time. In its native region of South Amer-

ica, where the climate is better adapted for blossom and maturation of seed, the potato flowers luxuriantly, but yields an insignificant crop of small acid tubers. Acting upon the knowledge of this principle, the farmer in Europe cuts off the flower-buds of the potato-plant to increase his crop of tubers; just as the tulip or hyacinth fancier prevents his plants from flowering, in order to increase the stock of his bulbs, which throw out a number of offsets from their bases. There is, it would seem, a certain amount of vital force in every plant, and if that force be expended on flowering, tubers will not be produced, and if on the production of an underground progeny, the seed will not be matured, as is the case with the horse-radish and Jerusalem artichoke. Here, however, it must be remarked, that tubers are not roots in the botanical sense of the word; they are true underground stems, which, instead of terminating in fruit and seed, terminate in nodes full of eyes or leaf-buds, and supplied with a quantity of farinaceous matter for the support of the young buds, till they have struck their roots, in the soil sufficient to elaborate their own sustenance. Let any one unearth a potato-plant with care, and he will at once perceive the difference between the true roots spreading out into minute fibres, and the underground stems terminating in tubers. The former are tough and fibrous, diverging into minute radicles, each tipped with its little sucking point or spongiolate; the latter are soft and succulent, undivided, and ending in a mass of farinaceous matter, studded with young buds. Each of these buds, if detached with a portion of the tuber, and placed in proper soil, will spring up into a perfect plant—the farinaceous fragment supplying it with food, until roots and leaves are formed.

The manner in which plants reproduce themselves *viviparously* differs according to the constitutional character of the individual. Some, as the elm and poplar, have their roots furnished with buds, which, sooner or later, sprout forth into offsets and suckers, as they are called, and these annually increase in bulk and height—ultimately becoming, under proper conditions, perfect trees. Others, as

the greater number of bulbs and tubes, multiply themselves by sending out runners, each of which produces several young plants; and herbaceous perennials extend themselves in the same way, either by runners underground, as the couch-grass, or above ground, as the strawberry. Most people must have observed the continual efforts of the latter plant to extend itself in this way; and so it is with many others—the propensity being most powerful where there is the least opportunity of bringing forth seed. It is often highly interesting to watch the progress of these runners. Where the soil is soft and favorable throughout, the young shoots are developed at about equal distances; but where the soil is hard, or covered with stones, the runner pushes its way over these obstructions, refusing to put forth a single bud until the proper conditions for its maintenance be reached. We have often seen a gravel-walk thus crossed by a strawberry runner, the runner being as budless as a piece of copper wire, until it had arrived at the soil on the other side, where it immediately put forth its young progeny in abundance. Instances of this kind are often ascribed to vegetable instinct; and were it not for the essential differences which evidently exist between vegetables and animals, one would be almost tempted to assign to it a higher designation. Some plants produce living seeds in the vessels where the ordinary seed is matured, as may be seen in certain species of the onion family—known as tree and apple onions; and others, like some of the lilies, yield little perfect bulbs in the axile of the stem leaves.

Another manner in which trees multiply themselves is by their branches bending downward till they touch the ground with the growing points, which then take root and spring up into independent stems. This frequently happens among trailing shrubs, as the bramble and honeysuckle, and may also be witnessed among our garden roses and gooseberries. A somewhat similar mode of extension is presented by the banyan, which becomes enlarged without the assistance of either seeds or suckers. Roots are produced by the under-side of the lower branches; these hang dangling in the air for many

months before they reach the ground; this at last they penetrate, and become stems to a new head of branches. An old tree of this kind presents a most magnificent object, forming concentric corridors over a great extent of surface. Acting upon the principles here pointed out by nature, gardeners propagate many of their favorites by layers; that is, by bending a branch or shoot till a portion of it be buried in the soil, where it throws out roots, and establishes itself as an independent plant. This being done, it is removed from the parent stock and placed in another situation.

Trees are also propagated by slips; that is, by detached young shoots being thrust into the soil, where they usually throw out roots, and grow up into healthy individuals. All plants of course can not be slipped with the same facility; but generally speaking, where there are well-developed leaf-buds in the axiles of the perfect leaves, and where there is true wood formed, the slip will be found to take root and grow. Budding is another artificial mode of propagation; it is, in fact, merely slipping at an earlier stage of growth. In the one case there are many leaf-buds on a common stem, in the other there is only a single bud. The operation is performed by taking the leaf-bud from one tree, and neatly inserting it under the cuticle of another, where, fed by the necessary juices, it extends into a new bough or arm.

Perhaps the most curious mode of natural reproduction is that by the leaf. It is well-known, that many leaves, as those of the *echeveria*, *malaxis*, *gloxinia*, orange, and others, when fallen to the ground in a young and growing state, put forth roots and become perfect plants. This fact is at present exciting much attention; and since all parts of a plant are but special developments of this single organ, it is argued that there is nothing to prevent the propagation of any species of vegetation by this simple means. Considering the truth and universality of the doctrines of morphology, we can not see why there should; and feel justified in the hope, that, once gardeners have arrived at a knowledge of the proper times and modes, they shall be enabled to rear any form

of vegetation from this universal organ. What a curious view of vegetable life do the principles of reproduction unfold! namely, that all parts of a plant, whether root, tuber, bulb, stem, branch, leaf, or seed—will under certain conditions, grow up into a perfect individual, similar to the parent from which it has sprung. All modes do not take place at the same time, for nature is never prodigally wasteful of her resources; but where climate or other conditions interrupt production by one source, another is developed more exuberantly than usual to supply its place. If we have not conditions to mature fruit and seed, there will be tubers, or suckers, or runners instead; and just as the chances of failure are great, so are the modes of reproduction proportionally increased. There is nothing corresponding to this in the animal kingdom, unless among the very lowest forms, as the polyps and sponges, which also increase by division. Lop away a branch from a tree, and its place may be supplied by another; break off the limb of a crab or insect, and another limb will shortly take its place; but while the detached branch will spring up into a tree similar to its parent, all vitality has fled from the separated limb of the crustacean. Higher animals than insects and crustaceans have no power to reproduce lost parts; but while devoid of this vegetative-like power, they have a more exalted sentient development; and if denied the power to reproduce a lost limb, they are endowed with faculties which can better protect them.

THE EARTH.—The surface of the earth is 196,862,266 square miles, and its solidity 257,726,934,416 cubic miles. Not more than one fifth of the whole earth is habitable by man. The mean depth of the ocean is about three miles, and the mean height of mountains above the level of the ocean is one and three fourths miles.

Distribute this land over the bottom of the ocean, and the waters would immediately rise to such a height as to cover the whole face of the earth. The mean annual temperature of the earth is fifty degrees.



Portrait of Sebastian Cabot.

SEBASTIAN CABOT.



N 1497, John Cabot, and his son Sebastian, from Bristol (England), arrived at Newfoundland, or, more probably Labrador; but no intimation is afforded of his having sailed to any distance along the coast.

In 1498, however, his son Sebastian, with two vessels, made an extensive survey, beginning in the latitude of 56 degrees, and terminating, it is said, in that of the straits of Gibraltar, or about 36 degrees. This must have brought him to the mouth of the Chesapeake, or even of Albemarle sound; and it is impossible not to regret that no details should be extant of this memorable voyage. He soon after sought the service of the Spanish monarch, and was created a member of the council of the Indies. In 1517, he is again found employed, though only as second to Sir

Thomas Pert, in an expedition from England, by which the exploration of Hudson's bay was certainly effected, though not actively followed up. Returning to Spain, he was promoted to the rank of chief pilot of that kingdom, and sailing under its flag, made the important discovery of the Rio de la Plata. Lastly, at an advanced age, being again in England, he was nominated grand pilot, and governor of the company of merchant-adventurers, in which capacity he drew up instructions for Sir Hugh Willoughby's noble eastern expedition. He appears to have ranked second to Columbus among the navigators of that age, superior in science, and rivaling him in enterprise, gallantry, and honorable feeling.

If a seaman should put about every time he encountered a head wind, it would be impossible for him ever to make a voyage. So the person who permits himself to be baffled by adverse circumstances, will never make the voyage of life.

RESUSCITATION.



THE purpose of respiration is to expose the portion of the blood which has returned to the heart, after it has circulated through the body, and which has acquired during that circulation the properties of dark or venous blood, to the influence of atmospheric air in the lungs. The oxygenous portion of the air so received into the lungs converts this venous blood into florid or arterial blood; that is, into a state for being again circulated through all parts of the system. Any interruption to this process—by submersion in water, exposure to choke-damp, strangulation, and the like—if continued beyond a few minutes, is destructive of life. Recovery is, however, possible within certain limits; hence the resuscitative appliances to cases of “suspended animation.”

The restoratives generally resorted to are warmth, friction, electricity, and, above all, supplying of the lungs with fresh or properly oxygenated air, either by free exposure to an external current, or by artificial injection. The cause of the latter appliance is sufficiently obvious, as the cessation of the heart's action, technically called *asphyxia*, is occasioned by the interruption of respiration, or rather by the interruption of the effect produced by that function on the blood. Any means, therefore, that can restore the process of respiration, or otherwise supply its place, till the action of the heart has been established, must be of value in resuscitation, and especially so where they can be applied with ease and rapidity. Various apparatus have been invented for the injection of common air; but as this fluid contains only about twenty parts in the hundred of pure oxygen, its effect upon the blood in the lungs can not be so rapid as that of a mixture containing a greater proportion, and still less so than oxygen itself. This gas has accordingly been long recommended; but the difficulty of obtaining it with sufficient rapidity has hitherto proved a barrier to its application. A new mode has, however, been proposed

by Dr. George Wilson, of Edinburgh, by which an unlimited supply can be obtained and administered in a few minutes, and it is to this that we would direct more general attention.

It has been some time known that the chlorate of potass, if mixed with a metallic oxyde—such as the peroxyde of iron, or the black oxyde of manganese—and heated to redness, will give off oxygen in a copious stream, and without any interruption, so long as there is any of that gas in the compound. The proportion of the metallic oxyde to the chlorate, is a matter of difference among chymists; but Dr. Wilson has found by repeated experiment that about one of the former to five of the latter is the most advantageous. We were recently invited to witness in his chymical class-room an exhibition of the apparatus by which he proposes to administer the gas, and which, in the opinion of medical men, is likely to prove efficacious. In this case the supply was on a limited scale only—some 600 or 800 cubic inches in four minutes—but from the rapidity and certainty with which the gas was produced and administered to a fictitious patient, it left the most favorable impression upon the minds of the spectators. A glass retort containing four or six ounces of the mixture, was heated with a spirit-lamp, and in a few seconds the gas began to be evolved, the evolution increasing in rapidity, till at the second minute it flowed over in a continuous stream, and was conveyed into an ordinary telescope gasometer. From this reservoir it was extracted by means of injection bellows fitted with flexible tubes, and then conveyed to the lungs of the supposed patient. This contrivance was next abandoned, and the head of the patient placed in an air-tight box, into which the gas was conveyed from the gasometer. This box was fitted with a glass-slip for watching the changes produced on the countenance of the patient; and the necessary inspirations and expirations were caused by external pressure on the chest, as is done in ordinary cases of administering atmospheric air. Indeed several methods of applying the gas were suggested; but to these we need not advert, as the great merit of the proposal consists in the rapidity with

which the supply can be produced and administered. On this head we think Dr. Wilson deserving of the thanks of the public, and especially for the pains he has taken in laying it before the medical faculty, the directors of humane societies, and others capable of making the application. Of the individuals who are asphyxiated by submersion, exposure to chokedamp, &c., only a small percentage are resuscitated by the appliances at present in use; but there is every reason to conclude, that if a supply of oxygen were obtained by the means above proposed, and kept in readiness at the offices of humane societies and otherwise, the recoveries would be trebled, or even quadrupled. It is agreed on all hands that pure oxygen is more efficacious in asphyxia than common air; and certainly no plan could be more rapid or more economical than that proposed by Dr. Wilson.

THE PERSPIRATORY TUBES OF THE SKIN.

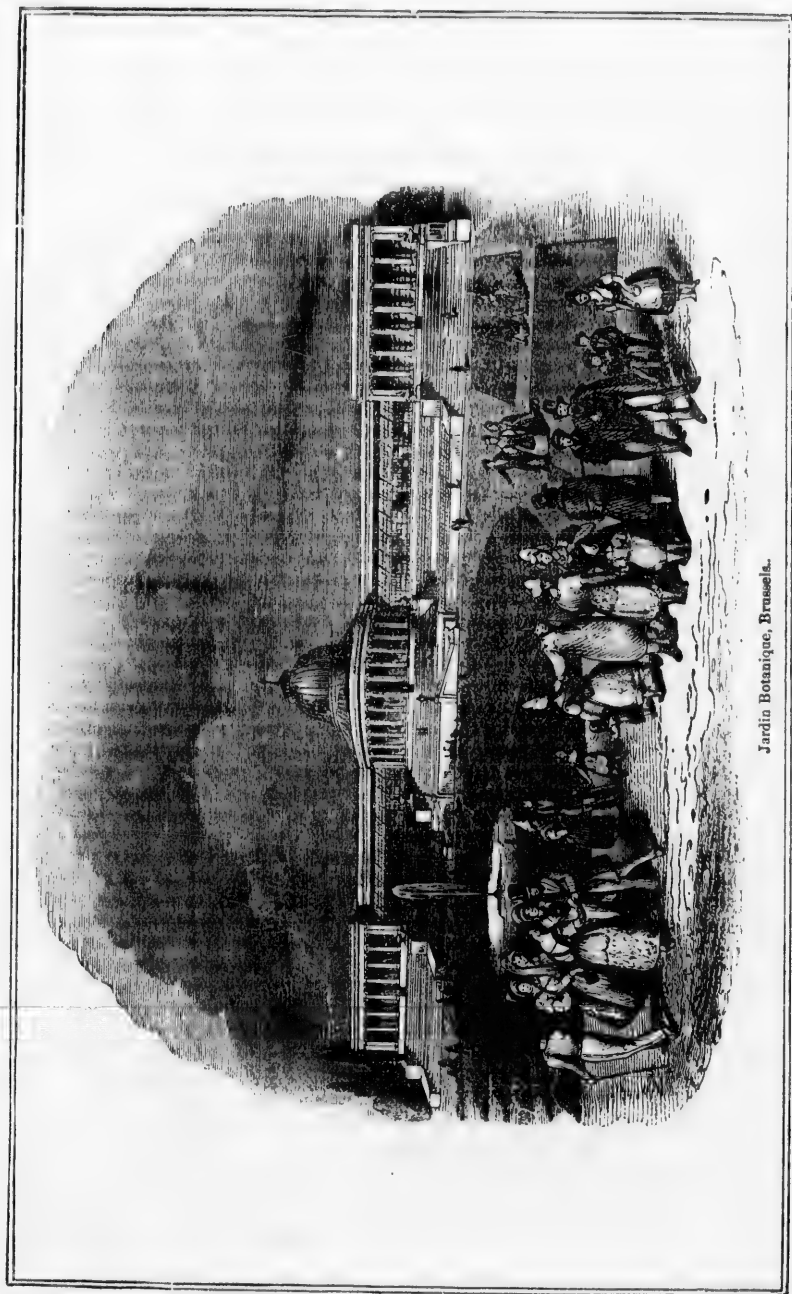
TAKEN separately the little perspiratory tube, with its appended gland, is calculated to awaken in the mind very little idea of the importance of the system to which it belongs; but when the vast number of similar organs composing this system is considered, we are led to form some notion, however imperfect, of their probable influence on the health and comfort of the individual. We use the words "imperfect notion" advisedly, for the reality surpasses imagination and almost belief. To arrive at something like an estimate of the value of the perspiratory system in relation to the rest of the organization, we counted the perspiratory pores on the palm of the hand, and found three thousand five hundred and twenty-eight in a square inch. Now, each of these pores being the aperture of a little tube of about a quarter of an inch long, it follows that in a square inch of skin on the palm of the hand, there exists a length of tube equal to eight hundred and eighty-two inches, or seventy-three feet and a half. Surely such an amount of drainage as seventy-three feet

in every square inch of skin, assuming this to be the average for the whole body, is something wonderful, and the thought naturally intrudes itself, what if this drainage were obstructed? Could we need a stronger argument for enforcing the necessity of attention to the skin? On the pulps of the fingers, where the ridges of the sensitive layer of the true skin are somewhat finer than in the palm of the hand, the number of pores on a square inch little exceeded that on the palm; and on the heel, where the ridges are coarse, the number of pores on the square inch was two thousand two hundred and sixty-eight, and the length of the tube five hundred and sixty-seven inches, or forty-seven feet. To obtain an estimate of the length of the tube of the perspiratory system of the whole surface of the body, we think that two thousand eight hundred might be taken as a fair average of the number of pores in the square inch, and seven hundred, consequently, of the number of inches in length. Now, the number of square inches of surface in a man of ordinary height and bulk, is two thousand five hundred; the number of pores, therefore, seven millions, and the number of inches of perspiratory tube, one million seven hundred and fifty thousand; that is, one hundred and forty-five thousand, eight hundred and thirty-three feet, or forty-eight thousand six hundred yards, or nearly twenty-eight miles.

BOTANIC GARDEN AT BRUSSELS.



BRUSSELS has long been celebrated for its "Jardin Botanique." It occupies the side of a hill which slopes upward from the Boulevard Botanique, on the northern rampart of the city. It is about half a mile long, by a quarter broad, and now contains a range of hothouses, four hundred feet long, ornamented with a rotunda and porticoes, and has an extensive collection of plants.



Jardin Botanique, Brussels.

The roof of the houses is formed of curvilinear iron bars, and the whole is heated by steam. The principal range of hothouses is shown in our engraving. It is on the terrace, having several fountains and broad flights of steps in front of it. The plants are labelled with their common and scientific names, and in some cases with the names of their countries. Opposite to the hothouses are the herbaceous grounds, laid out in a circular manner, and divided into small compartments for the Linnæan classification. The grounds generally are laid out in walks, and beds of well-cultivated native plants, intermingled with parterres of the more gaudy exotic races. They are also adorned with ponds and cisterns for aquatic vegetation, and at the west end is a small arboretum. In front of the hothouses is a "parade," furnished with seats; Brussels is seen from it with great advantage.

The gardens are open to the public three times a week, on Tuesdays, Thursdays, and Saturdays, from ten o'clock till three. They are open every day for students and foreigners. The society to whom this young but liberally and excellently managed institution belongs, is composed of natives and foreigners; they have half-yearly exhibitions at the rotunda, which is at the back of the central conservatory.

PIASAU ROCK.



PIASAU, or Pi-as-sau Rock, so called from a remarkable legend connected with it, is situated on the northern confines of the city of Alton, immediate on the Mississippi, from the surface of which it rises to a height of nearly one hundred feet, including a receding base of broken and shelving rock, extending about thirty feet from the water's edge, and about the same distance in height. Its summit is sparsely studded with dwarf cedars, and it presents a craggy and jagged front, with the exception of a space of about fifty feet

by forty, which is smooth and even. On this space is emblazoned the figure of a hybridous animal, having a head resembling that of a fox, from which protrude large horns or antlers; its back is supplied with wings, and it has a long curling tail, and four feet, or rather, four huge claws. The sketch of the figure is very rough, and evidently executed by no master hand. It seems to have been first drawn with a species of red paint, and afterward rubbed over and polished with lime, or some other white substance. Immediately in the rear is another figure, but so obliterated by time, and by being marked over with names of ambitious visitors (who have taken this only available method of making themselves known to fame), that it is impossible to trace its outline; it is probable, however, from the few marks visible, that it was intended to represent an animal similar to the former, but in a different position. The figure, which remains entire, is about eight feet long, and five in height, to the tip of the wing which is thrown upward over the back. The Piasau rock is the lower extremity of the bluffs, which, commencing at Alton, extend northward up the Mississippi river. It has been marked as we have described, "from the time whereof the memory of man runneth not to the contrary;" and what is most remarkable, the tradition connected with it, is not confined to a few tribes of Indians only, but seems to exist among all the aboriginal inhabitants of the great west, none of whom even to this day, pass the rock without discharging their arrows or rifles at the figure, upon and around which, are innumerable marks of balls and other missiles.

The legend, as we have heard it, is as follows: The numerous and powerful nation, called the Illinois, formerly inhabited the state which now bears their name, over the greater portion of which their hunting grounds extended. For very many years they continued to increase in numbers and prosperity, and were deemed the bravest and most warlike of all the tribes of the Great Valley. At length, in the most populous district of their country, near the residence of their greatest chief, there appeared an enormous animal, part beast, part bird, which took up its

abode on the rock, and banqueted daily upon numbers of the people, whom it bore off in its immense talons. It was covered with scales of every possible color, and had a large tail, with a blow of which it could shake the earth; from its head, which was like the head of a fox with the beak of an eagle, projected immense horns, and its four feet were armed with powerful claws, in each of which it could carry a buffalo. The flapping of its enormous wings was like the roar of thunder; and when it dived into the river, it threw the waves far upon the land. To this animal they gave the name of the "Bird of the Pi-as-sau," or the bird of the evil spirit. In vain did the "medicine men" use all their powers to drive away this fearful visitor. Day by day the number of their tribe diminished, to feed his insatiate appetite. At last the young chief of the nation, Wassatogo, who was beloved by his people, and esteemed as their bravest and best warrior, called a council of the priests, in a secret cave, where, after fasting for many days, they slept, and the Great Spirit came to the young chief in his sleep, and told him the only way to rid his people of their destroyer, was to offer himself as a sacrifice. Wassatogo started up with joy, and aroused the slumbering priests, informed them what had occurred to him, and of his determination to make the sacrifice required. He then assembled the tribe, and made a speech—recounting his deeds of valor, acquainting them of his dream, and exhorting them, like him, to be ever ready to die for their people. Wassatogo then dressed himself in his chieftain's garb, put on his war-paint, as if going to battle, and taking his bow, arrows, and tomahawk, he placed himself on a prominent point of the rock, to await the coming of the monster bird. Meanwhile, as he had been directed in his vision, a band of his best braves had been concealed in the interstices of the rock, each with his arrow drawn to the head, waiting the moment when their chief should be attacked, to wreak their last vengeance on their enemy. High and erect the bold Wassatogo stood, chanting his death dirge, with a calm and placid countenance, when suddenly there came a roar as of awful thunder, and in an in-

stant the bird of the Pi-as-sau, uttering a wild scream that shook the hills, darted upon and seized the chieftain in his talons; at that moment Wassatogo dealt it a blow in the head with his tomahawk, and his braves let fly their arrows from the ambush, and the unwieldy carcass of the bird rolled down the cliff, while the chieftain remained unhurt. The tribe now gave way to the wildest joy, and held a great feast in honor of the event, and to commemorate it, painted the figure of the bird, on the side of the rock on whose summit Wassatogo had stood, and there it has endured for ages, a mark for the arrow or bullet of every red man, who has since passed it, in descending the great father of waters.

Every people have had their traditions of monsters and strangely-formed destructive animals. The ancient Greeks and Romans had their stories of centaurs and of hydras; the Moors and Egyptians, their tales of anthropophagi and various other hideous creatures; and even the English have transmitted a legend of the winged dragon vanquished by St. George. Historians have traced the probable causes, and reconciled to nature the fables of the monsters of antiquity by allowing largely for the workings of the imagination, among a semi-barbarous people. It may be, that the tradition of the Pi-as-sau bird is not without a foundation in truth. when we reflect on it, in connexion with the enormous fossil remains found in various places in the west, and allow for the imperfect skill of the limners who sketched its portrait, and for the natural love for the marvellous in man, as well as for the additions made by the fancy of the rude savages who have perpetuated it in oral lore; and, taking these considerations together with the resemblance of many parts of the animals of tradition, to the skeletons of the mammoth, the mastodon, and the mis-sourium, it would be no uneasy or unreasonable task, to believe that some one of those animals formed the basis on which the imagination of the savage has erected his legend of the bird of the Pi-as-sau. In connexion with this subject, and with a view of throwing out a hint that may be useful to others, we make a few extracts concerning bones that have been found at

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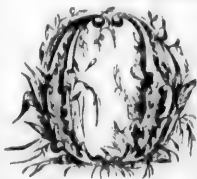
different periods and places. Dr. William Goforth, of Cincinnati, in a letter to Thomas Jefferson, dated in December, 1806, in describing some bones taken by him from Big-bone Lick, Kentucky, says: "The bones of one paw nearly filled a flour barrel; it had four claws, and when the bones were regularly placed together, measured from the os calcis to the end of either middle claw, five feet two inches. The bones of this paw were similar to those of a bear's foot. Where I found these bones, I found large quantities of bear's bones at the same time, and had an opportunity of arranging and comparing the bones together, and the similarity was striking in every particular, except the size. The vertebrae of the back and neck, when arranged in order with the os sacrum and coccygis, measured nearly sixty feet, allowing for cartilages; though I am not confident the bones all belonged to one animal, and the number of vertebrae I can not recollect. I had some thigh bones of incognita of a monstrous size, when compared with any other animal," &c.

In 1839, Mr. Albert Koch, proprietor of the St. Louis Museum, procured a large quantity of bones, from the vicinity of the Sulphur springs, on Little Rock creek, in Jefferson county, Missouri, about twenty-two miles south of St. Louis. To a skeleton formed of some of these bones, he gave the name of Koch's Missouriium. This animal had a trunk, and enormous tusks and claws, and was much larger than the Mastodon. Among the bones found by Mr. Koch, was the "head of an undescribed animal from which it appears that it exceeded the elephant from four to six times."

The tradition of the Indians certainly bears strong affinity to the existence of those immense animals, which have left us no trace of their being, except their bones. What an extensive scheme for conjecture and research, do they afford to the antiquarian, the naturalist, and the philosopher!

REMEMBER that labor is indispensable to excellence. This is an incontrovertible truth, although vanity can not be brought to believe, or indolence be made to heed it.

THE KINKAJOU.



Fsolitary and re-
cluse habits, this
animal for the most
part, lives among
the branches of the
trees in large for-
ests, and is in ev-
ery respect well
adapted for climbing; being, however,
decidedly nocturnal, it is but little exposed
to the observation even of those who so-
journ among the places frequented by it.
During the day it sleeps in its retreat,
rolled up like a ball, and, if roused, ap-
pears torpid and inactive. As soon, how-
ever, as the dusk of evening sets in, it is
fully awake, and is all activity, displaying
the utmost restlessness and address, climb-
ing from branch to branch in quest of food,
and using its prehensile tail to assist itself
in its manœuvres. Few mammalia are
more incommoded by light than the kin-
kajou; the pupils of the eyes contract to a
mere round point, even when the rays of
the sun have not been very bright, while
the animal at the same time testifies by its
actions its aversion to the unwelcome
glare.

In size the kinkajou is equal to a full-
grown cat, but its limbs are much stouter
and more muscular, and its body more
firmly built. In walking, the sole of the
foot is applied fairly to the ground, as in
the case of the badger. Its claws are
strong and curved, the toes on each foot
being five. The ears are short and round-
ed. The fur is full, but not long, and very
closely set. The kinkajou was not un-
known to Buffon, who, however, for a long
time confounded it with the glutton, nor
was he aware of his error until an oppor-
tunity occurred of his seeing two of these
animals. One was exhibited at St. Ger-
main in 1773, under the title of "an ani-
mal unknown to naturalists." The other
was in the possession of a gentleman in
Paris, who brought it from New Spain.
This latter individual was suffered to go
at large, being perfectly tame; and, after
rambling about all night, would return to
its accustomed sleeping-place, where it
was always to be found in the morning.
Without being docile, it is familiar, but



The Kinkajou.

only recognises its master, and will follow him. It drinks every fluid—water, coffee, milk, wine, and even brandy, if sweetened with sugar, with which latter it will become intoxicated; but it is ill for several days afterward. It eats, with the same indifference, bread, meat, pulse, roots, and especially fruits. It is passionately fond of scents, and eagerly devours sugar and sweetmeats.

DESCRIPTION OF TEXAS.



THE state of Texas is now divided into thirty-five counties, viz., Galveston, Harris, Brazoria, Matagorda, Victoria, Goliad, Refugio, Goliad, Milam, Jackson, Bexar, Bastrop, Travis, Fayette, Colorado, Austin, Fort Bend, Washington, Robertson, Montgomery (the giant county), Liberty, Jefferson, Jasper, Houston, Sabine, Nacogdoches, Rusk, San Augustine, Shelby (more familiarly known as *state of Tumaha*), Harrison, Bowie, Red River, Fanning, and Lamar.

Of these, Montgomery is the most populous of the interior counties, and Galveston the most populous of those situated on the coast. Galveston is the largest city of Texas, though Houston, perhaps, contains about the same number of inhabitants. The next city of importance is San Augustine, in which are located the Washington college, with about one hundred and forty students, and a seminary, with from sixty to seventy-five. It has a population of about fifteen hundred.

Austin, the seat of government, in Travis county, at the foot of the San Saba mountains, and figuratively called the "City of the seven hills," is beautifully situated on the Colorado, in one of the most picturesque and romantic portions of Texas. It has a population of twelve or fifteen hundred, and is rapidly increasing. The new constitution provides that the seat of government shall continue at Austin until 1850, when, should the state be

divided in the meantime, the probability is that it will be removed further east.

San Antonio de Bexar, near the extreme western frontier of Texas, on the San Antonio river, is the oldest and best built town in Texas. It was settled about two hundred years ago, under the auspices of an association of Spanish monks, and at one time contained about fifteen thousand inhabitants. But it has several times been nearly depopulated within the last century by the attacks from the Comanche Indians, it never having been adequately defended by its inhabitants, or the Spanish and Mexican governments, nor until its partial occupation by Texan or American citizens. The town is built entirely of stone, and now contains a population of about fifteen hundred, principally Mexican.

The Alamo, a dismantled fortress, the memorable scene of the lamented fate of Travis, Bowie, and Crockett, is situated on the east bank of the San Antonio river, opposite the town, and contains within its walls a church in a partial state of preservation. There is also in the city a large catholic cathedral, used by the Mexicans as a place of worship. This, like all the churches in the vicinity, of which there are five, are built in an ancient style of architecture, and give to the stranger the impression that he is wandering amid the Castilian edifices of old Spain.

There are two large public squares in the city of San Antonio, one called the Military square, intended for military occupation, and the other the Civil square, containing the public buildings of the municipal authorities.

About five miles above the city are the sources of the San Antonio river. These consist of four "fountains," or springs, the largest covering nearly an acre, and the others smaller in size. The water of these fountains is so transparent that a ten-cent piece may be seen at the depth of forty feet. The outlets to these fountains unite a short distance below, and at a point about three miles above the city, a dam of solid masonry is thrown across the stream, and aqueducts are thence constructed, on either side of the river, to convey the water from the main reservoir to the houses and gardens of the city and

below. These aqueducts were constructed perhaps a century and a half ago, by the catholic establishment; and under the regulations then established the proprietor of each hacienda was, as said, permitted to use the water for irrigating his entire plantation as often as required, and in quantities proportioned to the extent of his possessions.

There are three old catholic missionary establishments in the vicinity of San Antonio, situate on the river below the city, at intervals of a few miles. These, Conception, San Jose, and San Juan, are each a church, surrounded by a wall intended for purposes of defence. Within these walls are also erected numerous small buildings for the shelter and protection of the neighboring farmers, and their families during the predatory visits of the Indians.

It is a curious fact, that in a city like San Antonio, with the improvements described, its antique churches and other public edifices, should have existed for centuries, comparatively unknown, near the extreme western frontier of this now infant republic of the wilderness.

The other principal towns of Texas, are Matagorda, at the mouth of the Colorado, on Matagorda bay; Washington, on the Brazos; Corpus Christi, just sprung into existence, and numbering about 2,000 besides the United States army, of near 5,000, making in all a population of 7,000; Nacogdoches, Brazoria, on the Brazos river, and Montgomery, the capital of the county of the same name.

Cotton is principally raised, and to best advantage, on the Colorado, Brazos, Trinity, and Red rivers; but is also profitably cultivated in other sections. The sugar region is near the coast, and lying south of latitude 30°. Wheat, and the fine grains, are raised to most advantage in the mountains and hilly regions of the upper Colorado, Brazos, and Trinity rivers. Of the wilderness region above this point, toward Santa Fe, but little comparatively is known.

The principal streams are the Red river, navigable within Texas about 500 miles; the Sabine, navigable four months in the year about 400 miles; the Neches, for the same period, about 150 miles; the

Trinity, for seven months, about 600 miles; the Buffalo Bayou, navigated by steamboats every day in the year, from Houston to Galveston, about 100 miles, and the greatest thoroughfare of the country; the Brazos, four months in the year, 150 miles, and may be easily rendered navigable 300 miles; the Colorado, which by removing the raft at its mouth, may be navigated at least 400 miles; the Guadalupe, navigable about fifty miles; the Nueces, about 100 miles; and the Rio Bravo del Norte, about 600 miles.

BASS ROCK.

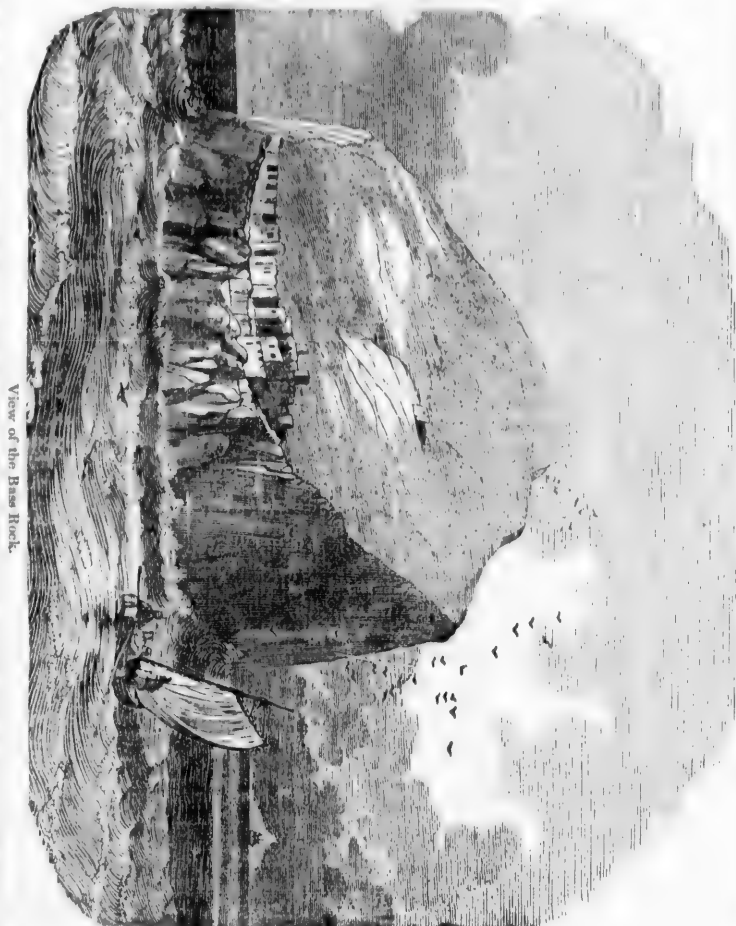


ASS Rock is one of the first objects seen in crossing the Scottish border by Berwick. This remarkable rock in the sea, lies at the mouth of the Frith of Forth, at the distance of a mile and a half from the coast of East Lothian. It is about a mile in circumference, and not much more than 400 feet above the level of the sea, but looks considerably higher. The water that washes its precipitous sides is from 30 to 40 fathoms deep. The rock can be approached in safety only in fine weather; and its stark, rugged cliffs, are only accessible by one narrow passage that faces the mainland. Close by this only landing-place is a castle, now in ruins, but once a place of great strength and some importance in history, consisting of four square towers and connecting works. During the war of religion between Charles II. and the covenanters, this castle was converted into a state-prison, and became the solitary residence of many west-country whigs and recusants. When the dynasty of the Stuarts was driven from the throne of the United Kingdom, the Bass Rock was occupied by a brave garrison devoted to that ill-fated family, who obstinately defended it for several years, and gained for the place the dubious honor, of its being the last spot

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View of the Bass Rock.

of British ground to yield to the improved and more constitutional government introduced by the revolution of 1688. Besides the castle there seems once to have been a hermitage and some other habitations on this rock; but soldiers, monks, prisoners, and peasants, have all been long gone; and now the only inhabitants of the Bass, are immense flocks of Solan geese, and some score of sheep, that contrive to climb up its precipitous sides and find pasture on its summit.

The base of the rock is perforated completely through from east to west, by a natural cavern fearfully dark in the centre, and through which the sea frequently dashes and roars with astounding violence, but which may be examined at low water on a calm day. When the tide is out, the water remaining in this curious fissure, at a few yards from its mouth, is not more than knee-deep. The young fishermen often go through it, though its aspect is exceedingly terrific. At one of the entrances to this cavern it appears as if the Bass were composed of two immense rocks, the larger of which leans diagonally against the smaller, leaving this narrow chasm between them at the bottom, but closely joining with each other at all other points. There are several other caverns of considerable length, the openings into which resemble fretted gothic windows or doors that have been made to deviate from the perpendicular by time or violence. The pencil of an able artist alone could convey an idea of their singularity and beauty.

INCIDENTS IN THE HISTORY OF WASHINGTON.



WE are all familiar with the fact, as declared by an Indian chief on the treaty ground, that he had three times taken deliberate aim (during the battle which ended in the defeat of Braddock), at Washington, then com-

manding the provincials, and missed every time. The following anecdotes relating to the same individual are not so generally known:—

Col. Ferguson of the British army, who lay with part of his riflemen on the skirts of a wood in front of Gen. Knyphausen's division, writing to his brother Dr. A. Ferguson, the day after the battle at Brandywine creek, states "we had not lain long, when a rebel officer, remarkable by a hussar dress, passed toward our army, within a hundred yards of my right flank, not perceiving us. He was followed by another dressed in dark and blue, mounted on a good bay horse, with a remarkably large high cocked hat. I ordered three good shots to steal near to them and fire at them, but the idea disgusted me; and I recalled the order. The hussar in returning made a circuit, but the other passed within a hundred yards of us; upon which I advanced from the wood toward him. Upon my calling he stopped, but after looking at me, proceeded. I again drew his attention, and made a sign to him to stop, levelling my piece at him; but he slowly continued his way. As I was within that distance at which, in the quickest firing, I could have lodged half a dozen balls in or about him, before he was out of my reach, I had only to determine, but it was not pleasant to fire at the back of an unoffending individual, who was acquitting himself very coolly of his duty; so I let him alone. The day after, I had been telling this to some wounded officers who lay in the same room with me, when one of our surgeons, who had been dressing the wounded rebel officers, came in and told us, that they had been informing him, that Gen. Washington was all the morning with the light troops, and only attended by a French officer in a hussar dress, he himself dressed and mounted in every point as above described. I am not sorry that I did not know at the time who it was."

Immediately after the organization of the present government, General Washington repaired to Fredericksburg, to pay his humble duty to his mother, preparatory to his departure to New York. An affecting scene ensued. The son feelingly remarked the ravages which a lingering

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his parent, and thus addressed her:—

"The people, mother, have been pleas-
ed, with the most flattering unanimity to
elect me to the chief magistracy of the
United States, but, before I can assume
the functions of that office, I have come
to bid you an affectionate farewell. So
soon as the public business, which must
necessarily be encountered in arranging a
new government, can be disposed of, I
shall hasten to Virginia, and—"

Here the matron interrupted him: "You
will see me no more. My great age, and
the disease that is fast approaching my
vitals, warn me that I shall not be long in
this world. I trust I am somewhat pre-
pared for a better. But go, George, fulfil
the high destinies which Heaven appears
to assign you; go, my son, and may that
Heaven's and your mother's blessing be
with you always."

The president was deeply affected. His
head rested upon the shoulder of his pa-
rent, whose aged arm feebly yet fondly
encircled his neck. That brow on which
fame had wreathed the greatest laurel
virtue ever gave to created man, relaxed
from its lofty bearing. That look which
could have awed a Roman senate, in its
Fabrician day, was bent in filial tender-
ness upon the timeworn features of this
venerated matron.

The great man wept. A thousand rec-
ollections crowded upon his mind, as
memory, retracing scenes long past, car-
ried him back to his paternal mansion, and
the days of his youth; and there the cen-
tre of attraction was his mother, whose
care, instruction, and discipline, had pre-
pared him to reach the topmost height of
laudable ambition; yet how were his
glories forgotten while he gazed upon her
from whom, wasted by time and malady,
he must soon part to meet no more on
earth!

The matron's predictions were true.
The disease which had so long preyed
upon her frame completed its triumph, and
she expired at the age of 85, confiding in
the promises of immortality to the humble
believer.

St. Paul exhorts to pray without ceas-
ing—habitual piety is ceaseless prayer.

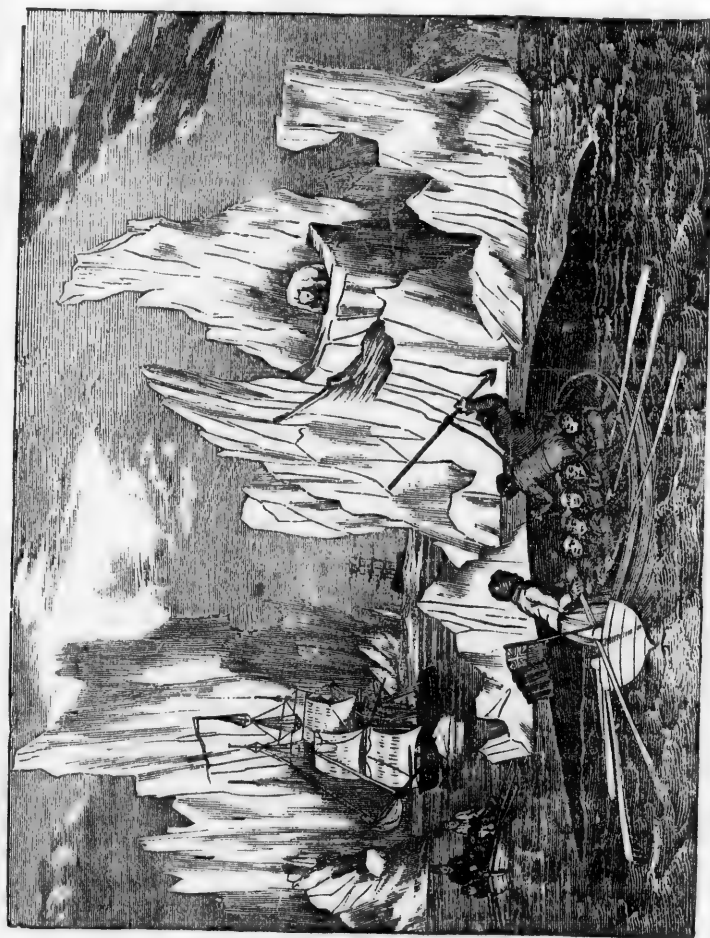
THE WHALE, AND WHALE-CATCHING.



N giving a description
of the whale, we must
necessarily repeat much
that has been written
by others; but one who
has seen them, in their
native element, and has
often met them in all
their terrors, can at least

strip his description of the exaggeration in
which most writers have indulged.

The whale may be properly divided
into two genera: the bone whale and the
sperm whale. I prefer this description to
the scientific one usually given, as it will
more definitely mark the difference of
these animals than classic words, to which
we attach little meaning. The bone
whales are of several species, all agree-
ing in general habits and character, but
each having some distinct characteristic.
The first and most important is the black
whale, or, as the Americans call him, the
right whale. This animal is usually about
fifty-six feet in length, the largest may
reach to sixty feet. Their color is black
on the back, and white on the centre of
the belly. Occasionally he is spotted
with white. The head of this creature is
about one third of his whole length. The
eyes are placed upon the sides of the
head, near the body, and from its great
size, it is consequently unable to see either
directly forward or behind it, so that it
may be approached very near, without
being alarmed. But the most singular
part of the animal is its mouth, and its
adaptation for collecting the food upon
which it lives. The upper jaw opens at
least fifteen feet in length, and is provided
with over five hundred laminae, or slabs
of thin black bone, which are hairy on the
inner side, and when seen without, have
the appearance of a Venetian blind, placed
perpendicularly. The under jaw is broad,
and when closed receives the ends of this
bone upon its soft gums. It is also pro-
vided with two immense lips, one on each
side, which are large enough to close the
whole mouth and cover the bone. Some
idea of these lips may be formed, when
we know that the longest bone, is fourteen
feet in length, and the largest lip will



Harpooning the Whale in the Arctic Seas.

make three barrels of oil. The body is from forty to fifty feet in circumference, and has two fins just behind the head, in which whalers, owing to the peculiar situation of the bones, trace a fanciful resemblance to the human hand and fingers. The use of the fins appears to be to direct their course, and not to assist them in swimming. The body is thick for the greater part of its length, but it tapers near the end, and finishes in a tail, or as it is usually called, in flukes. These flukes are from twelve to fifteen feet in breadth, and in them is placed the animal's means of offence and defence. With its flukes it strikes blows which may be heard at the distance of miles, and from their force, one would suppose that nothing could sustain them, but we find that, in their contests with each other, they seldom or never produce death.

This whale feeds upon the animalculæ of the ocean, more particularly upon a very minute species of shrimp, by the whalers called britt, which is found without the tropics, both in the northern and southern oceans. This is obtained by swimming with its mouth partly opened, until a sufficient quantity is collected and retained by the hairy bone of the upper jaw, when the lips are closed, and by means of its tongue this small food is collected and swallowed. Its manner of feeding would remind you of the grazing of the ox—the same disproportion between the size of its food and the animal to be supported. But when we reflect upon the fact that the ocean is teeming with life, and remember the immense net-like mouth of the whale, we shall at once see that the end is not disproportioned to the means. Like the ox too, this animal feeds industriously for a few hours, and then either rises above the surface and sleeps, or exercises itself in awkward gambols. If playful, it beats the water with its flukes, or sinks to the depths of the ocean, and ascends with such velocity that it throws its whole body out of the water. It can not remain long under the water at one time, but must ascend for respiration. Its usual time of breathing is once in fifteen minutes. It has two orifices on the top of the head which answer for nostrils, and when it throws out its

breath it is detected by the spray or steam which it throws up; owing to this, it becomes the prey of the whalers. This animal is sought for its oil and bone.

The other species of bone whale are the humpbacked whale, the finback, and a species called the sulphur-bottom, by American whalers (perhaps answering to the razor-back of the English). The humpback is killed for his oil, but his bone is small and of no value; he differs from the black whale in having a large hump on the back, and in his fins, which are at least fifteen feet in length, with which he strikes severe blows, and will readily destroy a boat. The finback whale is ninety feet in length, being much longer than either of the others; is distinguished from them by throwing his spout much higher, and by having a fin on the top of his back, and never lifting his flukes out of the water. He is also much fleetier than the black or humpbacked whales. For while they usually move but three or four miles an hour, and when excited can only for a short time accelerate their motion to ten or twelve miles, and must then stop and rest, the finback can readily move at the rate of twenty miles an hour (at the least), and will continue that rate for a length of time, that render all attempts to take him unavailing. The last and largest of the whale species, is the sulphur-bottom or razor-back whale. They have been met with at the estimated length of one hundred and thirty feet, they differ little in appearance from the finback, except that the back fin is nearer the tail, and their motion is much slower, seldom exceeding five miles an hour. They feed in the same manner as the black whale, and like them are killed for their oil. All the species of bone whale are alike in their habits, being all timid and cowardly, trusting to flight when attacked, and never if they can avoid it, defending themselves by injuring others.

The bone whales have but one known enemy except man. This is a fish called by whalers "the killer," about twenty feet long, rather large in the body, and armed with strong teeth, which attacks the bone whale for the sake of his tongue. He first fastens upon the blow-holes or nostrils of the whale until he is forced to

Harpooning the Whale in the Arctic Seas.



open his mouth to breathe, which then entering, he fastens upon the tongue and devours it, thus killing this immense animal, which would appear from its bulk to be safe from the attack of all minor creatures.

The sperm whale differs from the bone whale in its feeding. The food of the sperm whale is a species of animated vegetable, called squid, usually found in deep water. As this substance has much consistency, the whale is provided with thirty-six large teeth on the under jaw, with which it rends its food from the rocks to which it is attached. The head of the sperm whale is square at the end, and seems unfit for rapid motion, but it is so hard that it is unaffected by collision with hard substances, and one means of offence with this animal is to strike with the head. Its head is not only one third the length of the body, but contains one third of the oily matter of the whole creature; its upper jaw is frequently fourteen feet in thickness. Its upper surface of about six or eight feet in thickness (in a very large whale) is called junk, being formed of hard muscular fibres filled up with very fat oily matter. Beneath this is a cavity called the case, in which is contained a semi-liquid matter, which is spermaceti mixed with a little oil. This whale is not so timid as the bone whale, and has more means of offence. It can attack with its square head, its jaw, or its flukes, and either of them are usually fatal to its opponent. It is the monarch of the ocean, and probably the leviathan of Job. It is not usually dangerous or malicious, but when aroused and aware of its enemy, its ferocity is terrible; it is not satisfied with beating him off, but pursues him to his destruction. It pursues the boat of the whalers until he has dashed it in pieces; but they who man it are too contemptible an enemy for this terror of the deep; when the apparent enemy is destroyed, the men are left to their fate, and are safely picked up by another boat.

The sperm, like the bone whale, breathes air, but is capable of remaining longer under the water. It is usually supposed that the sperm whale remains as long under the water as he does on the surface; and the largest have been known to be

one hour and a quarter on the surface, breathing, and the same time below. This whale has but one nostril or spout-hole, and in breathing blows the spray forward and low. He moves slowly through the water when not excited, but when attacked is capable of moving seven or eight miles an hour, and continuing at that rate for a great length of time. The male of the sperm whale is much larger than the female; the largest male whales having produced from one hundred and fifty to two hundred barrels of oil, while the largest female never yields more than forty barrels. Of the same genus as the sperm whale are the porpoise and black fish. Their habits are similar, and their oil of the same kind. All whales produce their young alive, one every year, and the young are suckled like the calf until they are capable of providing for their own sustenance.

Having given a short account of the habits of whales, and the character of the different species, I shall now describe the manner of taking them and saving the oil.

A whale-ship is usually fitted with three or four boats, according to her size. Each boat is manned with six people—one mate, one harpooner, or boat-steerer, and four sailors. Besides the boats' crews, she has six or eight men to keep the ship when the boats are in pursuit of whales; having in all from twenty-five to thirty-three men on board. Each boat is provided with a tub containing thirteen hundred and fifty feet of tow-line, which, when used, is made fast to two harpoons. She also has several lances, which are sharp weapons five feet in length and made fast to a pole, and used to despatch the whale after the boat is made fast to him by the barb-harpoon. There are also several minor articles attached to the boat, which conduce to the safety of the men in case of accident. The ship is also provided with two or three large iron pots, capable of containing from one hundred and sixty to two hundred and twenty gallons each, for the purpose of boiling out the oil. Thus provided, the ship takes her departure in search of the monsters of the deep. At this time commences the toil and excitement of the whalers, which I shall now attempt to describe, using the lan-

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Dangers of the Whale Fishery.



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The ship goes on her course with an officer at her mainmast head, and a sailor at her fore. All is industry on deck. When the look-out aloft cries, "There she blows," instantly he is answered from the officer of the deck, with the shrill cry, "Where away?" He answers, giving the direction in which the fish is from the ship. Now all is bustle, but all is order. The captain with his telescope, ascends the mast, and observes the spout, and directs the ship to steer for the expected prey. The mates and boat-steerers prepare their weapons for the conflict. The men are all on the look-out to catch the first view of the whale from the deck. The old and seasoned whaleman looks forward to the strife with hope and excitement, and perhaps amuses himself by frightening the landsmén with the dangers they are about to encounter. At last comes the order, "Haul aback the mainyard, lower away the boats." In breathless haste the orders are obeyed, the boats are gone, the ship lies like a log on the waters, and all is silence and expectation. The boats speed toward their object, the old sailors recklessly indifferent to the danger, and highly excited with the hope of gain, and the pride of contest, the landsmén doubting but usually firm, and too proud to yield when others will lead.

Unaware of his danger, the leviathan of the deep lies idly on the water. His foe is upon him. All is silence and exertion; now comes the stern order to the harpooner, "Stand up—dart," and the barbed iron is buried deep in his vitals. Then is heard the shout, "Stern all" (to escape the danger of the agonized exertions of the wounded monster), and the reckless exultation of the daring whaleman; then writhing with pain he lashes the waters with his tail, and in the words of the Hebrew poet, "he maketh the sea to boil like a pot, one would think the deep to be hoary." But this soon passes away, his strength is exhausted, and he lies trembling on the waters, or he seeks safety in flight. Now the boat by its tow-line is brought near to him, and the mate with his lance, strikes him to the heart; he throws blood from his nostrils; his breath-

ing is choked; in his agony he lashes the water; the ocean resounds with his bel-lowing; his strength can endure no more, he rolls a lifeless mass on the waters, the prize and scorn of his puny enemy. Yet in all this there is but little danger to the bold and experienced whaleman. He watches the motions of his timid foe, he avoids the agonized blows of his tail, and suffers him to exhaust his great strength in futile exertions.

When the whale is dead commences the labor of saving the oil. The animal is brought along side of the ship, and secured by a chain around the small part of the body where it joins the flukes. Large tackles (or pulley-blocks with ropes rove through them) are made fast at the mainmast head, one end of the fall or rope is passed around the windlass forward; and to the lower block is attached a large hook. A hole is now cut in the blubber or outer coat of the whale, and the hook is placed in it; the men at the windlass then heave up the hook, a strip of about four feet in width of the blubber is cut by the officers of the ship, and the fat or blubber is peeled off as the bark is peeled from a tree. When a piece extending from the animal to the head of the mainmast is hove up, a new hole is cut and another tackle is made fast below, and the part above is cut off and lowered into the hold. The other tackle is hove up with another piece, rolling the whale over and over, until the whole of the blubber is taken into the ship. When everything valuable is secured, preparation is made to boil out the oil. Two men commence cutting the blubber into small oblong pieces. It is then passed to two others, who with large knives mince it thin, when it is placed in the large pots and heated until the oil flows from it, and all the water is expelled. The oil is then bailed into a large copper vessel from which it runs through a strainer into a large pot, and is thence put into casks and rolled away to cool. The scraps or solid matter of the blubber are used for fuel, so that every part is useful; and if it were not for the scraps, no ship could carry wood enough to boil out its oil. When the oil is cooled it is sent below into casks in the hold, by means of leather hose, and is there done

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with until the ship arrives at home. The description of a whale-ship boiling at night, may amuse, and would convey no bad idea of the fancied infernal regions of former days. If the observer were placed near enough to see the general movements, and yet not so contiguous as to let dull reality dispel the illusion of appearance, and could fancy the heaving ocean glaring in the fitful light to be liquid sulphur, he would have the material hell of our precise ancestors before him. The men feeding their huge fires, and now stirring them into fierce action, the bright blaze flaring wide over the ocean and throwing in bold relief visages blackened by smoke, unshorn and shaggy, their bright steel forks and pikes now flashing in the light, and now indistinct as the flickering blaze fades away, and again seen as the master-demon throws boiling oil into the blaze (to give light to his operations), the hasty movements of the men passing suddenly before the fires and then lost in darkness, or their forms thrown at length before the blaze in the moments of relaxation—a morbid fancy might easily make it an image of terror, or a lighter mood might laugh at the ridiculous pageant as it passed before him.

PERSISTENCY OF FAMILY FEATURES.



It is well known that personal peculiarities of all kinds, defects as well as beauties, casts of features, and traits of expression, are transmitted from parents to their children. The fact stares us in the face whenever we enter a family parlor, for there it is invariably seen that the young people bear a resemblance in one respect or another to their father or mother, or to both. This is a subject which has never, as far as we are aware, been honored with more than a transient notice at the hands of the learned; yet it might be worthy of philosophical investigation. We merely propose, in this place, to illustrate it by a

few facts, which we have picked up either from personal observation, or from books.

Sometimes the reproduction of face and figure in the child seems almost perfect. Sometimes face is borrowed from one parent, and form of head, or of body, or of some of the limbs, from the other. Occasionally, there is a remarkable blending of the two throughout the whole or parts of the person. Even peculiarities in the carriage of the head or of the mode of walking are transmitted, and a family voice is nearly as common a marvel as a family face. A man, in a place distant from his home, and where he was totally unknown, has been distinguished as the brother of one known there by the sound of his voice heard in a neighboring apartment. But the almost perfect reproduction of the elder Kean's voice in the younger, is perhaps the most convincing illustration we could adduce upon this point. It will also be found that children resembling either parent externally, have a stronger affinity of mental character to that parent than to the other. A gentleman, very intimately known to us, is strikingly like his father, who has been deceased since his early youth: he also exhibits the same dispositions and intellectual tendencies in a remarkable degree, delights in the same studies, has the same turn for the perception of human character; nay, he often feels, in the simplest procedure of common life, so absolute an identity with what he remembers of his father in the same circumstances, and at the same period of life, as expressed by gesture and conversation, that it seems to him as if he were the same person. Nor can this, he says, be a result of imitation; it is something which takes place independently of all design, and which he only remarks, in general, after the act or feeling or movement, which recalls his father, has passed.

But it is not parents alone who are thus reproduced in new generations. In a large family familiarly known to us, as are all its relationships, we see, in the young persons, resemblances both to the father and mother and to one or other of the two grandfathers and grandmothers, notwithstanding that, in one or two instances, the intermediate generation did not bear those features of the first which are traced

in the third. It thus appears that a peculiarity will sink in one generation, and reappear in the next. Perhaps even more generations than one are occasionally passed over. In this family, several of the children are totally different from the rest; complexion, form, gesticulations, voices, all peculiar. This seems to be owing to their "taking after" different parents, or the families to which the different parents belonged. What makes this the more remarkable, is, that one of these children, while in all respects unlike certain brothers and sisters, has one feature strikingly recalling the image of a distant cousin—a character of feature not seen in any other existing member of the family, and not remembered of any that are deceased. It would appear as if these minutiae of family characters flitted about fitfully and vaguely, and only settled now and then upon individuals in a clan, sometimes upon not more than two, or perhaps upon one only, in the same age. From all of these facts, it may be inferred that the strong resemblances sometimes remarked between cousins, are indications of their representing a common original, and of their being in reality more consanguineous than are many brothers and sisters. The unsuitableness of such relations for matrimonial alliances, must of course be affected by this consideration. Where resemblances exist, their union may be held as even more decisively condemned by nature, than is that between brothers and sisters who are not observably alike.

The limitation of portrait-painting as to time, is a bar to our knowledge with regard to instances of long transmission of family faces and features. Yet enough is ascertained to establish the law of the case. In the royal family of England, a certain fulness of the lower and lateral parts of the face is conspicuous in the portraits of the whole series of sovereigns, from George I. to Victoria. It has been equally seen in other members of the family. The Duke of Cumberland who figured at Culloden, presents generally the same visage as several of the sons of William IV. This physiognomy may be traced back to Sophia, the mother of George I.; how much further, we can

not tell. It is equally certain that a thickness of the under lip, peculiar to the imperial family of Austria (Maria Louisa is said to be characterized by it), has been hereditary in the race since a marriage some centuries ago with the Polish house of Jagellon, whence it came.

A remarkable anecdote illustrative of this subject was told us, some years ago, by a gentleman who has since distinguished himself in the walk of fictitious literature. Born in Nova Scotia, where his family, originally Scotch, had been settled for the greater part of a century, he had not an opportunity of visiting Scotland till past the middle of life. Here he endeavored to see as many as possible of the individuals bearing his rather uncommon name, and in this quest he often took journeys to considerable distances. Having heard of a family of the name residing at a lonely farm among the Lammermuir hills, he proceeded thither on foot from the nearest market town. As is not uncommon in such situations, the approach of a visitor could be observed from this house while he was yet fully a mile distant. Mr. H—— was observed at that distance by some of the children, who immediately cried out with one voice, "There is Uncle George!" When the stranger arrived at the house, the seniors of the family fully acknowledged the general resemblance of the figure and carriage to the person called uncle George; and it was ascertained, after a little conversation, that the Nova Scotian was in reality their cousin at two or three removes.

When Mr. William Howitt visited Stratford-on-Avon, in order to write respecting the places connected with Shakspeare, the schoolmaster informed him that a descendant of a near relation of the poet was one of his pupils. "He marshalled his laddish troop in a row," says Mr. Howitt, "and said to me, 'There, now, sir, can you tell which is a Shakspeare.' I glanced my eye along the line, and quickly fixing it on one boy, said, 'That is the Shakspeare.' 'You are right,' said the master, 'that is the Shakspeare—the Shakspeare cast of countenance is there. That is William Shakspeare Smith, a lineal descendant of the poet's sister.' The lad," continues Mr. Howitt, "was a fine lad of

perhaps ten years of age; and certainly the resemblance to the bust of Shakspeare, in the church at Stratford, is wonderful, considering he is not descended from Shakspeare himself, but from his sister, and that the seventh in descent. What is odd enough, whether it be mere accident or not, the color of the lad's eyes, a light hazel, is the same as that given to those of the Shakspeare bust, which it is well known was originally colored, and of which exact copies remain." These observations of Mr. Howitt are confirmed by a portrait of the youth, which he gives in his book. We are the less disposed to entertain doubts on the subject, in consequence of circumstances which have fallen under our own notice. Some years ago, a young man in humble life came forward to claim the restoration of the forfeited titles of the Seaton, earls of Wintoun, his grandfather having been assured that he was a legitimate though obscurely born son of the noble, who lost honors, and lands, by joining in the insurrection of 1715. From want of evidence, the claim was a hopeless one, and it was not prosecuted; but of one fact there could be no doubt that the young man so nearly resembled the sons of the fifth Lord Seaton, as represented in a family picture painted by Antony More, that he might have passed for their brother. These persons lived in the latter half of the sixteenth century.

The doubts which might rest on cases of particular resemblance in families, ought perhaps to be in a great measure dispelled, when we reflect on the evidence that exists with respect to the persistency of external characters in sets and races of people. Not only have we such facts as the prevalent tallness in the inhabitants of Potsdam, where Frederick I. assembled his regiment of longitudinal guards, and a strong infusion of Spanish features in the people of the county of Galway, in which some centuries ago several Spanish settlements were made; but we are assured by Major Bevan that he could distinguish the several castes in India by their peculiarities of countenance; and the Jews are the same people in Egyptian entablatures of three thousand years ago, as they are in some countries at the present day. Mr. Kohl, in his travels in Austria, speaks of

Prague as a very garden of beauty. "For the young ladies of 1811," says he, "I am ready to give my testimony most unreservedly, and many an enraptured traveller has left us his books as living witnesses to the loveliness of the grandmothers and great-grandmothers of the present generation. The old chronicler, Hammerschmidt, and his contemporaries, dwell with equal pleasure on the sweet faces that smiled upon them in their days, and the picture-gallery of many a Bohemian castle is there to testify to the truth of their statements. One witness there is to the fact, whose right few will question to decide on such a point. Titian, who studied the faces of lovely women for ninety-six years, and who, while at the court of Charles V., spent five years in Germany, tells us it was among the ladies of Prague that he found his ideal of a beautiful female head. If we go back beyond the times of Titian, we have the declaration of Charles IV., that Prague was a *hortus deliciarum*, and whoever has read the life of that emperor, will scarcely doubt that beautiful women must have been included in the delights of a capital so apostrophized. Nay, the time-honored nobility of the beauty of Prague may be said to go back even to the earliest tradition, where we find it celebrated in the legends of Libussa and Vlasta, and the countless songs composed in honor of the Devy Slavanske or Tshekhian damse's."

While there is a law of persistency, there seems also to be one modifying it, a law of variation. The continuance of national features depends much on adherence to the same region of the earth, and the same mode of living. When a people migrate to a remote and differently characterized clime, they are often seen to undergo, in the next generation, a change of features and of figure. Thus the unctuous Saxon of Kent and Suffolk, when transferred to Massachusetts, becomes metamorphosed into the lank and wiry New-Englander. Descendants of British settlers in the West Indies have been remarked, after several generations, to acquire some of the peculiar features of the aboriginal Americans, particularly high cheek-bones and eyes deeply set in the head. It has also been remarked in

New South Wales, that the generation of English born there are changed from their progenitors—taller, and less robust, besides having a share of that nasal tone which is found in the American English. These are curious facts, conveying the impression that national forms have been determined to some extent by peculiarities of climate and other external influences.

In the main, one generation is represented in another succeeding it. We die as individuals, but the character in mind and body, "with a difference," is preserved and continued by those who come after us, and the tissue of human races is a kind of immortality.

POPE'S TREE.



THE village of Binfield, in Berkshire, situated about seven miles west of Windsor, and within the precinct of the forest, is remarkable from having been the residence of Alexander Pope, during his early years. The father of the poet, having accumulated a considerable fortune by business in London, retired to this place during the infancy of his son, and here purchased a house and estate.

Speaking of this house, which, although probably much altered from its original state, is still standing, Pope calls it—

— "my paternal cell.
A little house, with trees a-row,
And, like its master, very low."

About half a mile from the house, an interesting memorial of the poet still remains, or at least did so a few years since. There is here a fine grove of beeches, pleasantly situated on the gentle slope of a hill, which commands an agreeable though not extensive view of the surrounding country. This grove was a favorite resort of Pope's, who is said to have composed many of his earlier pieces sitting under the shade of one of the trees, below which a seat was then placed. The recollection of this circumstance was pre-

served by Lady Gower, an admirer of the poet, who caused the words "HERE POPE SANG," to be cut in large letters in the bark, at some height from the ground, and as this inscription, at the time we mention, was distinctly legible, it was no doubt, at one period, occasionally renewed.

RETROSPECTION.



WE know of no spectacle so well calculated to teach human humiliation, and convince us of the utter fragility of the proudest monuments of art, as the relics which remind us of vast populations that have passed from the earth, and the empires that have crumbled into ruins. We read upon the ruins of the *past* the fate of the *present*. We feel as if the cities of men were built on foundations beneath which the earthquake slept, and that we abide in the midst of the same doom which has already swallowed so much of the records of mortal magnificence. Under such emotions, we look on all human power as foundationless, and view the proudest nations of the present as covered only with the mass of their desolation.

The Assyrian empire was once alike the terror and wonder of the world, and Babylon was perhaps never surpassed in power and gorgeous magnificence. But where is there even a relic of Babylon now, save on the faithful pages of Holy Writ? The very place of its existence is a matter of uncertainty and dispute. Alas! that the measure of time should be doomed to oblivion; and that those who first divided the year into months, and invented the zodiac itself, should take so sparing of immortality as to be, in the lapse of a few centuries, confounded with natural phenomena of mountain and valley.

Who can certainly show us the site of the tower that was "reared against heaven"? Who were the builders of the pyra-

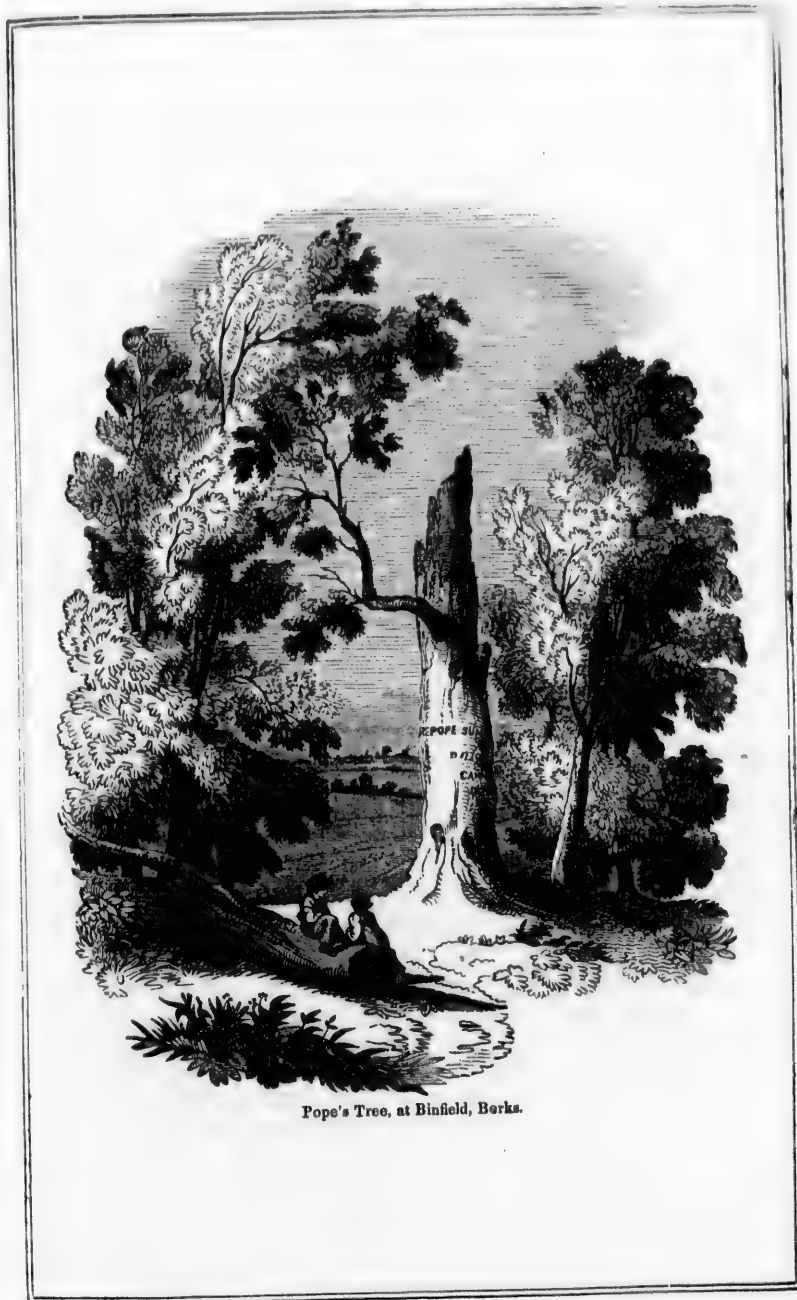
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mids that have excited so much the astonishment of modern nations?

Where is Rome, the irresistible monarch of the east, the terror of the world? Where are the proud edifices of her glory, the fame of which has reached even to our time in classic vividness? Alas, she, too, has faded away in sins and vices. Time has swept his unsparing scythe over her glories, and shorn this prince of its towering diadems.

"Her lonely columns stand sublime,
Flinging their shadows from on high,
Like dials which the wizard Time
Hath raised, to count his ages by."

Throughout the range of our western wilds, down in Mexico, Yucatan, Bolivia, &c., travellers have been able to discover the most indisputable evidences of extinct races of men highly skilled in learning and the arts, of whom we have no earthly record, save the remains of their wonderful works which time has spared for our contemplation. On the very spot where forests rise in unbroken grandeur, and seem to have been explored only by their natural inhabitants, generation after generation has stood, has lived, has warred, grown old, and passed away; and not only their names, but their nation, their language, has perished, and utter oblivion has closed over their once-populous abodes. Who shall unravel to us the magnificent ruins of Mexico, Yucatan, and Bolivia, over which hangs the sublimest mystery, and which seem to have been *antiquities in the day of Pharaoh*? Who were the builders of those gorgeous temples, obelisks, and palaces, now the ruins of a powerful and highly-cultivated people, whose national existence was probably before that of Thebes or Rome, Carthage or Athens? Alas! there is none to tell the tale; all is conjecture, and our best information concerning them is derived only from uncertain analogy.

How forcibly do these wonderful revolutions, which overturn the masterworks of man, and utterly dissolve his boasted knowledge, remind us that *God is in them all*! Wherever the eye is turned, to whatever quarter of the world the attention is directed, there lie the remains of more powerful, more advanced, and more highly skilled nations than ourselves, the almost

obliterated records of the mighty past. How seemingly well-founded was the delusion, and indeed how current even now, that the discovery of Columbus first opened the way for a cultivated people in the "new world." And yet how great reason is there for the conclusion, that while the country of Ferdinand and Isabella was yet a stranger to the cultivated arts, America teemed with power and grandeur—with cities and temples, pyramids and mounds, in comparison with which the buildings of Spain bear not the slightest resemblance, and before which the relics of the old world are shorn of their grandeur!

All these great relics of still greater nations, should they not teach us a lesson of humiliation, confirming, as they do, the truth that *God is in history* which man can not penetrate? If the historian tells us truly that a hundred thousand men, relieved every three months, were thirty years in erecting a single Egyptian pyramid, what conclusion may we not reasonably form of the antiquities of our own continent, which is almost by way of derision, one would suppose, styled the "*new world*!"

LEEDS CASTLE, KENT.



N a wild park south-east of Maidstone about five miles, stands Leeds Castle, an extensive pile of military architecture, principally of the thirteenth, fourteenth, and fifteenth centuries. In its history, there is little beyond that attaching to every other similar building, which can "point a moral or adorn a tale." It passed several times from the crown to the favorites or faithful servants of the sovereign. Having by its strength and importance excited the jealousy of Edward I., the family which then held the fief resigned it to Edward II., who, about 1318, granted it in exchange to the "rich Lord Badlesmere of Leeds." This nobleman is said by Philipot, in his "*Villare Cantianum*," to have lost it by his

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castellain refusing to receive Isabel, queen of Edward II., and her train, on a progress to Canterbury, because the messengers brought the castellain no authority from his lord. The king was so much incensed at this uncourteous treatment, that orders were given to besiege the castle, which was taken, and the unfortunate keeper was hung. The lady and children of Lord Badlesmere were sent to the Tower, and the Lord Badlesmere joined the barons then in arms, but he and his associates and their followers being defeated by the royal forces, he was put to death at Canterbury. Richard II. resided at Leeds Castle at several periods; and during an alarming visitation of the plague, in the second year of the reign of Henry IV., that king also made it his residence. George III. and his consort visited the castle in 1779, and remained there two days.

The first stack of buildings on approaching the castle from the east, consists of the remains of towers, once of almost impregnable strength; but they are now sapped to their foundations by a stream of water from the surrounding moat, which is fed by a rivulet called the Len. In whatever point of view it is regarded, the most picturesque combinations are visible; the great lines are finely broken; the masses boldly projected; the colors chastely blended, and in many places beautifully relieved by groups of ash and other trees, which cluster round the older and more decayed towers; and the picture is finished by an amphitheatre of umbrageous hills.

PARIS AT THE PRESENT DAY.



LACE de la Concorde is the casket in which is contained the richest jewels in the crown of Paris, I might say of all the capitals in the world. There are, in many cities, monuments, which, when taken separately, are as beautiful as those

which form the frame of this magnificent picture, but nowhere are they brought together as in this place. Let us endeavor to station ourselves in the middle of this panorama, that we may understand it as a whole and in its details.

In the middle of the square, rises the obelisk of Luxor, that speaking witness of Egyptian grandeur, from the height of which the empire of the Sesostris, and the genius of past ages, looks down upon the grandeur and genius of the present time. On each side of this page of history, cut in granite, two magnificent fountains throw their sheets of water over groups of bronze, the wonders of modern art. Each basin, set in an embankment of asphaltum, is surrounded by fifteen or twenty candelabras. The whole surface of the Place is also covered with asphaltum, and surrounded with monumental candelabras, the stands and gilded branches of which give to the whole place a delicate yellow tint, which is in harmony with the tone of the obelisk. A passage has been arranged for carriages from the four cardinal points of this compass, of which the obelisk forms the hieroglyphic needle. A more noble portico could not have been formed for the *Champs-Elysees*, the fabulous name of which, has now become a truth. Lighted by gas from one end to the other, and in every direction, the sides of the paths of this drive have become a bed of lava which tempts the delicate feet of pedestrian ladies. Basins, statues, sumptuous restaurateurs, have sprung up on every side. The Olympian circus carries there, during the summer, its equestrian spectacles, for which a scene has been prepared worthy the Roman amphitheatres. On the other side the panorama displays its magical canvass. Everywhere, travelling artists, ropedancers, musicians, punches, dispute for your attention, and attract your eyes, by the preliminary games which compose *les bagatelles de la porte*. While the crowd separates into different groups, walking, seated, grouped together before the mountebanks, the cocoa merchant glides from one to the other, and his silver bell appeals to thirsty throats; the dealer in sweetmeats and barley sugar drives a rival trade, and while boys are led away by these tempt-

ers, the little babies who have not yet the use of their legs are drawn about in small carriages, to each of which four little goats are harnessed. On the course, brilliant equipages, on their way to the Bois de Boulogne, meet omnibuses and coucoos, returning from Chailly and Neuilly. As the crown to this moving scene, this Parisian fair, the triumphal arch of the star, lifts in the distance its gigantic form, which is not equalled in proportion or richness, by any of the monuments of the kind which have remained from Grecian and Roman antiquity. This triumphal arch was finished before 1837; the Hippodrome has recently been built beside it. The Champs-Elysees has become the favorite rendezvous of Parisians, of both sexes, the famous alleys of the Tuilleries itself, are almost abandoned for this unrivalled promenade. Now that you have a feeble idea of the moving picture which is offered by the Champs-Elysees, look into this kaleidoscope from the middle of the Place de la Concorde—seize upon these thousand details, and then turn to contemplate the shady alleys of the garden of the Tuilleries, the beautiful marble groups with which it is decorated, and the imperial and royal palace to which are affixed so many recollections of grandeur, of terror, and of glory—on the right, salute the Magdalene and her Grecian portal, the Garde-Meuble, and the Hotel de la Marine, with their terraces and uniform colonnades; on the left, turn your eyes to the bridge, Louis XV., which has been judiciously relieved from the colossal statues which crushed it—to the severe front of the Chamber of Deputies—to the Dome des Invalides, which to meet your eye lifts its head of gold and bronze above the roofs—follow the Seine, which, changing its color in accordance with the objects reflected from its sides, goes off toward Passy, looking back with regret—and you will say it is a sight, unique in the world. But it is not by daylight that it is to be looked at; it is in the evening, at night, when two or three hundred gas-burners, from the Place de la Concorde, and five or six hundred from the Champs-Elysees, are lighted up at once. Then the picture is fairy-like, the eyes are dazzled by these legions of sparkling lights, by these sheaves of water,

which murmur and shine, by this moving crowd, these rolling carriages, these children singing, women laughing, coachmen shouting, the whole city in motion, and finally by their thousand gigantic and phantasmagoric shadows. It is Nineveh, Babylon, Thebes, Rome; it is all these, and more than all these—it is Paris!

Paris covers at the present day a surface of more than 6,900 French acres, is peopled by a million of inhabitants, and contains 32,000 houses. This last item does not seem at first as high as might have been supposed. But it will be perceived to be immense, when it is borne in mind, that these are not houses, separated as in London by frequent squares, and that they all have from five to eight stories.

The total length of all the public ways, is about 500,000 metres or 125 leagues; that is the distance from Paris to Lyons.

The public streets count at the present time 3,210,000, square metres of pavement, and 800,000 of streets not paved, not including the Champs-Elysees and the Champ de Mars.

The subterranean aqueducts under Paris make a length of 110,000 metres, or 27½ leagues.

150,000 metres of pipe carry the water into every quarter. They supply 126 public fountains, 15 fountains for merchandise, and 1,600 private fountains.

150 leagues of pipe distribute the gas which lights the city, into all its quarters.

Add to all this a continuous wall, surrounded by ditches and bastions, covering a circumference of 14 leagues, and protected by sixteen Titans of stone and bronze, sixteen fortresses—a work of national defence which has no equal in the records of any nation, and which is the most grand of all the enterprises conceived and executed by Louis Philippe—that in which he has most largely wrought into masonry and melted into bronze, his immortality—that which would redeem, if necessary, in the eyes of intelligent patriots, all his errors or his faults, because it secures for the future the national independence, by rendering invulnerable the heart and the head of France, and meets the invaders of the country with the tactics of a strategy different from that which made the success and caused the reverses

of Napoleon. Place before your eyes all these wonders, all these great works, and the ant-heap moving within this triple enclosure of granite and of brass. Such is Paris.

THE SPRINGER ANTELOPE.



HE antelope represented in the engraving, is one of the most beautiful of the various species of antelopes which inhabit southern Africa.—

It has received from the Dutch colonists the name of springbok, from the bounding leaps which it takes, and also pronkbok, showy or beautiful buck, from the colors which it discloses in leaping. This latter effect is caused by two folds of the skin, which, ascending from the root of the tail, and terminating upon the croup, dilate when the animal is bounding, and expose a large triangular space, otherwise concealed, of pure white-colored hair, edged by two dark streaks. The head of the animal is rather short, with somewhat of the expression of a lamb: the neck is slender, the body comparatively bulky, and the legs slender and elegantly turned. It is larger than the gazelle, but of the same make and color.

It resides on the plains of south Africa, to an unknown distance in the interior, in flocks, assembling in vast herds, and migrating from north to south, and back with the monsoons. These migrations, which are said to take place in their most numerous form only at the intervals of several years, appear to come from the northeast, and in masses of many thousands, devouring, like locusts, every green herb. The lion has been seen to migrate, and walk in the midst of the compressed phalanx, with only as much room between him and his victims as the fears of those immediately around could procure space by pressing outward.

The migrations of innumerable companies of springboks from unknown regions

in the interior of Africa to the abodes of civilization, are among the most extraordinary examples of the fecundity of animal life. The vast quantity of a species of birds of South America, which produce the guano (a manure) in sufficient abundance to be a great article of commerce—the flocks of pigeons of North America—the locusts of Africa—are not more striking than the herds of springboks.

It is scarcely possible for a person passing over some of the extensive tracts of the interior and admiring that elegant antelope, the springbok, thinly scattered over the plains, and bounding in playful innocence, to figure to himself that these ornaments of the desert can often become as destructive as the locusts themselves. The incredible numbers which sometimes pour in from the north during protracted droughts, distress the farmer inconceivably.

The springbok, like the hare, conceals itself in cover during the day, and resorts to the open plain in the evening and at night, for the purpose of feeding only. The Cape antelope, in fact, perfectly resembles the hare in all its characteristics. It lies continually in its form, leaving it only to procure food, or to escape from its enemies.

The bok is shot in great numbers by the Dutch boors. This sport is usually pursued on horseback, and in the heat of the day. The animal is then lying in its habitual lair, and on being disturbed by the sportsman, springs from it with a succession of bounds, than which nothing can be more beautiful or graceful.

The Dutch boor is generally an unerring shot; but in case the antelope should be only wounded, the buck-dog (a species of large mongrel) is always at the heels of his master's horse, and, at the report of his gun, darts forward and secures the animal. It is then placed behind the saddle, in the way shown in the engraving.

The horse used in buck-shooting is the hardy serviceable animal common to the country. Many of them are so well trained, that they stop the instant the bok gets up, but in most cases a slight check is necessary; the rein is then dropped on the horse's neck, and he remains motionless.

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Hunting the Springbok at the Cape of Good Hope.



PRESENCE OF MIND.



THE differences of the conduct of individuals in situations of danger and sudden emergency are very striking; nor do we always find the best conduct in such circumstances from those who act best in the ordinary affairs of life. Often has it happened that a clever shrewd man of the world, has lost all reflection and power to act when unexpectedly overtaken by danger; and not less frequently do we see prompt and vigorous conduct manifested, on like occasions, by women who have never before given token of their being in any respect endowed above their neighbors. Presence of mind thus appears as something not necessarily to be found in union with high intellect or skill. A cunning bravery of the timid, a cowardly, but laudably cowardly adroitness of the brave, it sometimes almost appears as an inspiration; and yet we know that it is but a natural endowment, capable, like all others, of being cultivated in everybody by the use of appropriate means. We have heard of a gentleman who took his son to bathe, and actually threw him into a situation of danger, in order to elicit and train his presence of mind: we also know that barbarous nations of warlike character use similar methods with their youth, by way of fitting them for every kind of peril and ambuscade. It is not, perhaps, desirable that any such plans should be resorted to in our present civilized circumstances; but certainly there is much need to prepare the minds of the young for difficulties and crises, by a full explanation of such as are still likely to occur in the course of life, and by accustoming them as far as possible to habits of prompt action and self-reliance. Much might be done in parlor existence, merely by establishing a certain cool manner for the treatment of all extraordinary matters; for we are so greatly creatures of habit, that, if we allow ourselves to be thrown into an excitement by all the little out-of-the-way occurrences of life, we are extremely likely to

be thrown into a paroxysm of the same feeling by events of greater moment; nor is it less true that a steady and sober way of viewing small matters will fit us for viewing great ones without the excitement which produces confusion of mind. We verily believe that the stupid habit of getting up a clamor about trifles, has led in many instances to that wildness of alarm in cases of danger which not only forbids escape to the unhappy being exhibiting it, but tends to paralyze and endanger others. The general safety often depends on an entire suppression of excitement and outcry, and it is therefore of the greatest consequence that every person should be trained to a *quiet*, not to speak of a firm manner of acting under trivial difficulties.

The value of such conduct on occasions of peril involving many lives, was never perhaps better exemplified than in the destruction of the Kent East Indiaman by fire, when not even from the women and children was one sound of alarm heard, the consequence of which was, that the officers and sailors were enabled to do all that was possible in the circumstances for the preservation of the people on board, and the whole of the procedure connected with their transference to the saving-vessel was conducted with as much regularity and almost as much safety, as if it had taken place on an ordinary occasion. In striking contrast was the scene on board the Halsewell, where the two daughters of the captain, losing all self-command, threw themselves upon their father with such frantic cries and lamentations, as overwhelmed his naturally intrepid mind, and thus extinguished the energies upon which at the moment so much depended.

We so continually, in the journals of the day, see evil consequences from want of presence of mind, in circumstances where the proper conduct has long been generally agreed upon, that we might be tempted to believe it a quality beyond mortal reach, if we were not aware how many things, which appear notorious to all, are in reality unknown to many. Hardly a week passes without telling us of a female having caught fire and lost her life in consequence of rushing out into the open air, instead of rolling herself in a carpet, or at least prostrating herself on the floor.

roxysm of the same greater moment; nor steady and sober way matters will fit us for without the excitement of mind. We e stupid habit of get-out trifles, has led in at wildness of alarm which not only forbids by being exhibiting it, and endanger others. often depends on an excitement and out- re of the greatest con- y person should be ot to speak of a firm der trivial difficulties. conduct on occasions any lives, was never plified than in the de- East Indiaman by fire, the women and chil- of alarm heard, the ch was, that the of- ere enabled to do all the circumstances for the people on board, procedure connected ce to the saving-ves- th as much regularity safety, as if it had rdinary occasion. In the scene on board e the two daughters ng all self-command, on their father with and lamentations, as curally intrepid mind, d the energies upon t so much depended. y, in the journals of equences from want d, in circumstances nduct has long been on, that we might be it a quality beyond ere not aware how ppear notorious to all, n to many. Hardly ut telling us of a fe- re and lost her life in ing out into the open g herself in a carpet, g herself on the floor.

Panics occasionally take place in theatres and churches, and scores of lives are lost by a crowding to the door: not one instance do we remember of an alarm in such places of resort being attended by the proper conduct—*sitting still*. Individuals are also still much given to throwing themselves out of runaway carriages, an act which may be pronounced the very opposite of the proper conduct. But the fact is, that, while some of these errors are the consequence of mere confusion of mind, many are also the result of ignorance. The right conduct in situations of difficulty is far from being generally impressed, as it ought to be, on the minds of the young. Or, if it has been taught as a lesson, there has at least been no effort to train the mind to look to it as the only course of action in which there is the least safety; so that when the critical moment arrives, we are still too prone to act upon some mere instinct for self-preservation.

Presence of mind is exemplified in its simplest form, where all that is necessary is to take a deliberate view of the circumstances, and then do that which seems most advantageous. It may be shown, for example, in a choice between the door and window in a case of fire, or in the selection of something to be saved, as that which is most important. In the year 1716, when a captain came with his troop to execute the vengeance of the government upon the house of a Jacobite gentleman in Perthshire, he humanely gave the inmates a few minutes to remove whatever they deemed most valuable. A lady, the sister of the absent landlord, flew to the storeroom, thinking to save the plate; when she afterward inspected the contents of her apron on the lawn, she found, too late, that she had only rescued a quantity of old candlesticks, butter-boats, and similar trash. A gentleman just escaped from a fire in his house, joyfully told his congratulating friends that, in the midst of the confusion, he had been able to open a drawer and save his principal papers. He emptied his pockets, and found only scraps of no use, which had chanced to lie in the same place. We have also heard of a gentleman and his wife who escaped with great difficulty from their burning house, he bearing, as he thought,

their infant in his arms. It proved to be but a pillow which he had snatched up in his haste! A moment devoted to a steady, thoughtful consideration of the circumstances, might in all these cases have been attended with the opposite consequences.

Presence of mind is occasionally shown in quick conception of some device or expedient, such as we usually suppose to be an emanation of superior intellect. This has been repeatedly exemplified in rencontres with the insane. A lady was one evening sitting in her drawing-room alcove, when the only other inmate of the house, a brother, who for a time had been betraying a tendency to unsoundness of mind, entered with a carving-knife in his hand, and shutting the door, came up to her and said, "Margaret, an odd idea has occurred to me. I wish to paint the head of John the Baptist, and I think yours might make an excellent study for it. So, if you please, I will cut off your head." The lady looked at her brother's eye, and seeing in it no token of a jest, concluded that he meant to do as he said. There was an open window and a balcony by her side, with a street in front; but a moment satisfied her that safety did not lie that way. So putting on a smiling countenance, she said, with the greatest apparent cordiality, "That is a strange idea, George; but wouldn't it be a pity to spoil this pretty new lace tippet I have got? I'll just step to my room to put it off, and be with you again in half a minute." Without waiting to give him time to consider, she stepped lightly across the floor, and passed out. In another moment she was safe in her own room, whence she easily gave an alarm, and the madman was secured.

Some anecdotes of escapes from assassins and robbers, by the prompt exercise of presence of mind, are much to the same purpose. A young man, travelling in one of the public coaches, was much interested by the accounts of robberies which his fellow-passengers were detailing. An old gentleman mentioned that he always took the precaution of secreting his money in his boot, merely keeping silver for his incidental expenses in his pocket. The old gentleman appeared to be captivated with the politeness and intelligence of the young man, to whom he addressed much of his

conversation, who on his part was equally pleased with the kindness and urbanity of his elder companion. Thus some hours had passed agreeably, when, just at night-fall, as they were passing a wild and lonely moor, the coach was stopped by robbers, who rifled the pockets of those nearest to them, giving the old gentleman a hearty execration for having his purse so badly furnished. They came last to the young man, who was seated in the far corner, and demanded his purse. "I never carry any money," said he. "We'll not take your word for that," said his assailants. "Indeed I don't," said the young man; "my uncle always pays for us both, and there he is," continued he, pointing to the old gentleman, "and he has got our money in his boot." The old gentleman was dragged from the coach, his boot pulled off, and three ten-pound notes were found. He was then suffered to resume his seat, and the coach drove on. Hot was his anger, and bitter were his upbraidings, against his betrayer, whom he did not hesitate to accuse both of treachery and pusillanimity. The young man listened in silence, as if ashamed and conscience-stricken. They passed over some miles, and at length reached an inn by the wayside. The travellers alighted, and on going in, the young man requested the old gentleman would allow him to say a few words in private. They retired into a room by themselves. "I have not only to ask your pardon, my dear sir," said the young man, "but to thank you for the fortunate expedient with which your confidence furnished me, and to hand to you the sum of thirty pounds, in lieu of that which I appeared so unceremoniously to point out to the robbers. I am sure you will forgive me, when I tell you that the note-case in my pocket contained notes for £500, the loss of which would have been utter ruin to me." It need scarcely be added, that the adopted uncle shook hands cordially with his young acquaintance, and took him into more marked favor than ever.

But there are more painful tests to which presence of mind may be put than even personal danger, however great. It is when, seeing a beloved object in imminent peril, one inadvertent word, one pas-

sionate exclamation, one burst of sensibility, might increase the risk tenfold. It were needless to insist on the urgent necessity of presence of mind, in the form of self-command, at such a time, and we will merely illustrate the subject by an example where the strongest sensibilities of our nature were suppressed, while some, without one particle more of affection, but many thousand degrees less of sense and self-control, would have screamed, or fainted, or acted so as to hurry on the catastrophe most dreaded. A lady one day returning from a drive, looked up and saw two of her children, one about five, and the other about four years old, outside the garret window, which they were busily employed in rubbing with their handkerchiefs, in imitation of a person whom they had seen a few days before cleaning the windows. They had clambered over the bars which had been intended to secure them from danger. The lady had sufficient command over herself not to appear to observe them; she did not utter one word, but hastened up to the nursery, and instead of rushing forward to snatch them in, which might have frightened them, and caused them to lose their balance, she stood a little apart, and called gently to them, and bade them come in. They saw no appearance of hurry or agitation in their mamma, so took their time, and deliberately climbed the bars, and landed safely in the room. One look of terror, one tone of impatience from her, and the little creatures might have become confused, and lost their footing, and been destroyed.

It has sometimes happened that, in hurry and confusion, a wrong medicine has been administered by the hand of one who would have sacrificed life to save a beloved object from the danger with which they were threatened by a sudden illness or accident, and who, had they preserved their presence of mind, might have been spared one of the bitterest misfortunes that can be conceived. To have self-possession in such a case, may be life and health to one who is everything to us. It may happen, too, that illness or accident may overtake us while away from medical aid, or distant from any friend.

Presence of mind may also be brought

one burst of sensibility the risk tenfold. It is on the urgent need of mind, in the form of such a time, and we are the subject by an exchange of sensibilities of pressed, while some, more of affection, but less of sense and have screamed, or to hurry on the case. A lady one day, looked up and saw one about five, and years old, outside the ch they were busily with their handkerchief a person whom they before cleaning the and clambered over the n intended to secure The lady had sufficient herself not to appear ne did not utter one p to the nursery, and ward to snatch them frightened them, and e their balance, she and called gently to come in. They saw hurry or agitation in k their time, and de- ne bars, and landed One look of terror, ce from her, and the t have become con- footing, and been de- happened that, in hur- wrong medicine has y the hand of one who ed life to save a be- e danger with which by a sudden illness p, had they preserved nd, might have been bitterest misfortunes l. To have self-pos- ease, may be life and everything to us. It t illness or accident ile away from medi- m any friend. may also be brought

to bear with good effect in many of the trivial conjunctures of life. It is often shown in a ready answer, turning anger into good humor, or overturning a false accusation, which otherwise might have proved troublesome. There can be no question that it may be improved for serious emergencies by being cultivated in these familiar and more simple cases. But there is one caution to be observed—let presence of mind be used only as a defence. When employed for purposes of deception, or to advance selfish objects, we may admire it as an intellectual feature, but regret must at the same time arise, that the direction given to it is one in which we can not sympathise.

MUSIC.

WHAT is that strange enchantment which results from harmonious sounds given forth by an instrument or the human voice? We call it music, but what is there in the harmony of sounds or the melody of voices, that should so strangely affect the human mind? The infant falls into a gentle slumber while listening to the cradle-song of a watchful mother or nurse. The proud and haughty spirit of the boy is subdued by the charms of song. The wayward youth is roused from his profligacy and melted to tears and penitence, by the recurrence of some simple melody heard often in childhood. The heart of manhood is chastened and mellowed, and the soul lifted from earth as it listens to or joins in the swelling anthems of the sanctuaries of God. Under the influence of martial music, the soldier rushes heedless to slaughter and death. The spirit-stirring drum must be beaten and heard above the discharge of musketry and roar of cannon, to nerve him to conflict. The Marseilles hymn will rouse the populace of France to madness, and the British soldier dies upon the field of battle in triumph, if he can but listen to his national anthem. And why is this, if the soul of man be not itself an exquisite instrument, attuned to the harmonies of the universe—an immortal harp, whose strings catch the breath of every melody?

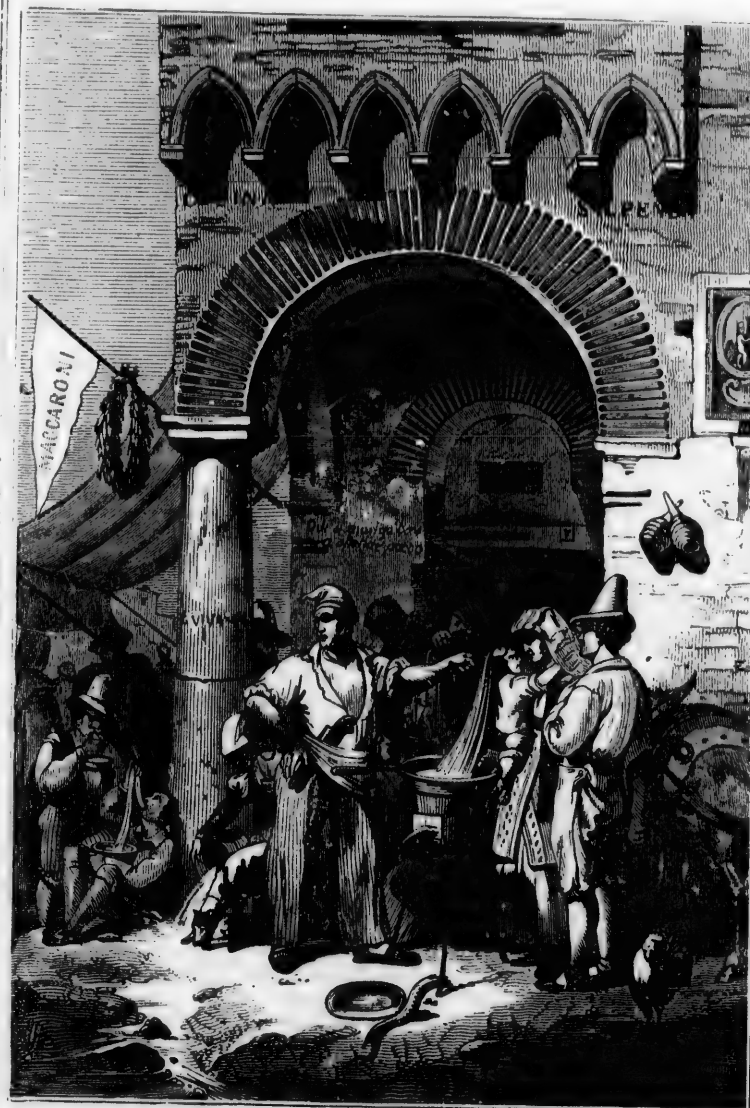
NEAPOLITAN MACCARONI-EATERS.



MACCARONI or maccheroni (the learned are divided as to the orthography and etymology of the word) is the principal food of the poorer, and the

favorite dish of all classes of Neapolitans. So much is this the case, that the people of Naples have had for many ages the nickname of "Mangia-maccaroni," or macaroni-eaters.

The best macaroni is made entirely of the grano duro; but, in the inferior qualities, this is sometimes mixed with soft wheat. The conversion of the flour—which is somewhat more coarsely ground than that intended for bread—into the long, round strings called macaroni, is effected by a very simple process. With the addition of water alone, the flour is worked up into paste, and this paste is kneaded for a length of time, by a heavy, loaded block of wood, which beats into the trough where the paste is deposited; this block or piston is attached to a beam, acting as a lever, whose fulcrum is near to the block, while the other extremity of the beam is some eight or ten feet from the fulcrum. One or more men or boys seat themselves astride at the further end of this beam, and descending with their own weight, and springing up by putting their feet to the ground, give the requisite reciprocating motion to the lever. They, in fact, play at see-saw with the block at the shorter end of the lever; and the effect produced on the eye of a stranger by a large manufactory where several of these machines and a number of sturdy fellows, nearly naked, and all bobbing up and down, are at work, has something exceedingly ludicrous in it. When the paste has been sufficiently kneaded, it is forced, by simple pressure, through a number of circular holes, the sizes of which determine the name to be given to the substance. That of superior diameter is macaroni, that smaller is vorticelli, and that smaller still is called fedelini. The macaroni is hollow throughout, and many persons have



The Macaroni Sellers of Naples.

been puzzled to know how it is formed into these long tubes. Nothing is more simple. Over each of the larger holes meant for macaroni, a small copper bridge is erected, which is sufficiently elevated to permit the paste to pass under it into the hole: from this bridge depends a copper wire, which goes right through the hole, and of course leaves hollow the paste that descends through the hole. Such of our readers as have seen our common clay pipes for smoking manufactured, will readily understand this, for this part of the process is the same for macaroni as for pipes. There are some minor distinctions in the preparation of these respective articles, which it would be tedious to explain, but the material and main process are the same in all. When the paste has been forced through the holes, like wire through a wire-drawer's plate, a workman takes up the macaroni or vermicelli, and hangs it across a line to dry. From the long kneading it has received, the substance is very consistent, and dries in unbroken strings that are two or three yards in length.

This paste forms the principal food of the poorer classes of Neapolitans, many of whom do not eat meat for weeks, nay months together, but they care not for this if they can have their macaroni, which is to them a substitute for every eatable.

THE FLIGHT OF TIME.



IN every age of the world the rapid flight of time has been a subject of deep and solemn consideration. When the patriarch of Israel stood before the monarch of Egypt and listened to his question—"How old art thou?" it seemed to throw a melancholy interest over the past. Long as this aged man had lived, the time appeared to him but as a dream, and as he looked upon the numbered years which had laid his fathers in their sepulchres, and brought

himself near to their resting-place, a spirit of sadness came over him.

No orator has been more eloquent upon the flight of time than the man of Uz—"Man that is born of a woman is of few days and full of trouble. He cometh forth like a flower, and is cut down. He fleeth also as a shadow and continueth not. His days are swifter than a weaver's shuttle; they are passed away as the swift ships, and as the eagle that hasteth to his prey."

Coming down the tide of time still further, we find the noble monarch of Israel and the sublime Isaiah, sending forth their sad numbers. "The days of man are as grass. As a flower of the field, so he flourisheth. For the wind passeth over it, and it is gone, and the place thereof shall know it no more."—"All flesh is grass, and the goodliness thereof as the flower of the field."

The great apostle to the Gentiles writes to the Corinthians to be careful of their earthly relations, for the "time is short," and another apostle assures us that "life is but a vapor that appeareth for a little time and then vanisheth away." Whatever may be the true cause, in an apostate world, the flight of years casts a shadow over its generations. If sin had never entered the world, probably the tide of time would produce no such feelings as we now experience in its rapid passage. Death and decay would be unknown. Age succeeding age would bring no sad reverse, no melancholy change. If time departed, it would only add wisdom, loyalty, and love, to sinless hearts. But this is not the case. We are in a world where sin has entered, where the process of decay is constantly going on, and where death is busily and always at work. We see monuments of arts and genius arise under the hand of man. The finger of time touches them and they turn to ashes. The proudest productions of human power, the most magnificent structures which the skill or pride of man can rear, are destined to fall before the devouring ravages of time.

Surrounded thus with the evidences of frailty and decay, warned at every step of the certainty of our dissolution, as well as that grand catastrophe when the world shall burn and the elements melt with fer-

vent heat, wise will it be for us so to number our fleeting days as to apply our hearts unto wisdom, and cause the fugitive hour to bear record of good to Him in whose hands are all our times, and who commands our breath.

APRIL.



PRIL is usually supposed to be derived from the Latin word *aperio*, to open: our Anglo-Saxon ancestors called it *Oster Monath*, and *Easter Moneth*, and are said to have held a feast in celebration of the goddess *Eastre*.

April weather is become a proverbial expression for a mixture of the bright and gloomy. The pleasantness of the sunshiny days, with the delightful view of fresh greens and newly-opened flowers, is unequalled; but they are frequently overcast with clouds, and chilled by rough wintry blasts.

This month gives the most perfect image of spring; for its vicissitudes, of warm gleams of sunshine and gentle showers, have the most powerful effects in hastening the universal *springing* of the vegetable tribes; whence the season derives its appellation. April generally begins with raw, unpleasant weather, the influence of the equinoctial storms still in some degree prevailing.

Early in the month, that welcome guest and harbinger of summer, the swallow, returns. The kind first seen is the chimney or house-swallow, known by its long forked tail and red breast. At first, here and there only one appears, glancing quick by us, as if scarce able to endure the cold. But in a few days, their number is much increased, and they sport with seeming pleasure in the warm sunshine.

As these birds live on insects, their appearance is a certain proof that some of this minute tribe of animals are now got

abroad from their winter retreats. "The migration of birds," says the excellent Mr. Ray, "from a hotter to a colder country, or a colder to a hotter, according to the season of the year, as their nature is, I know not how to give an account of, it is so strange and admirable. What moves them to shift their quarters? you will say, the disagreeableness of the temper of the air to the constitution of their bodies, or want of food. But how come they to be directed to the same place yearly, though sometimes but a little island, as the Solan geese to the Bass of Edinburgh frith which they could not possibly see, and so it could have no influence upon them that way. The cold or the heat might possibly drive them in a direct line from either, but that they should impel land birds to venture over a wide ocean, of which they can see no end, is strange and unaccountable! one would think that the sight of so much water, and present fear of drowning, should overcome the sense of hunger, or disagreeableness of the temper of the air. Besides, how come they to steer their course aright to their several quarters, which, before the compass was invented, was hard for a man himself to do, they being not able, as I noted before, to see them at that distance? Think we that the quails, for instance, could see quite across the Mediterranean sea? and yet it is clear they fly out of Italy into Africa, lighting many times on ships in the midst of the sea, to rest themselves when tired and spent with flying. That they should thus shift places is very convenient for them, and accordingly we see they do it; which seems to be impossible they should, unless themselves were endued with reason, or directed and acted upon by a superior intelligent Cause."

MUSCULAR STRENGTH.

THE power exerted by the action of the muscles in the human body is immense. Borellus first demonstrated that the force exerted within the body greatly exceeds the weight to be moved, and that nature, in fact, employs an astonishing, we might

enter retreats. "The says the excellent Mr. to a colder country, ter, according to the as their nature is, I ve an account of, it is irable. What moves arters? you will say, of the temper of the n of their bodies, or how come they to be place yearly, though e island, as the Solan of Edinburgh frith t possibly see, and so uence upon them that he heat might possi direct line from either, i impel land birds to ocean, of which they range and unaccount- nk that the sight of sc esent fear of drown e the sense of hunger, of the temper of the come they to steel o their several quar the compass was in a man himself to do, as I noted before, to nce? Think we that nce, could see quite nean sea? and yet it of Italy into Africa, on ships in the midst emselves when tired g. That they should very convenient for y we see they do it; mpossible they should, ere endued with rea- acted upon by a su- use."

STRENGTH.

d by the action of the an body is immense. strated that the force body greatly exceeds ved, and that nature, stonishing, we might

almost say superfluous power, to move a small weight. It has been calculated that the deltoid muscle, alone, which is situated near the top of the shoulder, when employed in supporting a weight of fifty pounds, exerts a force equal to two thousand four hundred and sixty-eight pounds. An idea of the force exerted by the human body when in progressive motion, may be formed from the violence of the shock received when the foot unexpectedly strikes against an object in running. The strongest bones are sometimes fractured by the action of the muscles.

The muscular power of the human body is indeed wonderful. A Turkish porter will trot at a rapid pace, carrying a weight of six hundred pounds. Milo, a celebrated athlete of Croona, in Italy, early accustomed himself to carry the greatest burdens, and by degrees became a monster in strength. It is said that he carried on his shoulder an ox four years old, weighing upward of one thousand pounds, for above forty yards, and afterward killed it with one blow of his fist. He was seven times crowned at the Pythian games, and six at the Olympian. He presented himself the seventh time, but no one had the courage to enter the list against him. He was one of the disciples of Pythagoras, and to his uncommon strength the learned preceptor and his pupils owed their lives. The pillar which supported the roof of the school suddenly gave way, but Milo supported the whole weight of the building, and gave the philosopher time to escape. In his old age, Milo attempted to pull up a tree by its roots and break it. He partly effected it, but his strength being gradually exhausted, the tree, when half cleft, reunited, and his hands remained pinched in the body of it. He was then alone, and being unable to disengage himself, died in that position.

Haller mentions that he saw a man, whose finger being caught in a chain at the bottom of a mine, by keeping it forcibly bent, supported by that means the weight of his whole body, one hundred and fifty pounds, until he was drawn up to the surface, a height of six hundred feet.

Augustus II., king of Poland, could roll up a silver plate like a sheet of paper, and twist the strongest horseshoe asunder.

A Frenchman, who was attached to Rockwell & Stone's circus, last spring, was able to resist the united strength of four horses, as was witnessed by hundreds in New York and other places. A lion is said to have left the impression of his teeth upon a piece of solid iron.

The most prodigious power of muscle is exhibited by fish. The whale moves with a velocity through the dense medium of water, that would carry him, continued at the same rate, round the world in little less than a fortnight; and a sword-fish has been known to strike his weapon quite through the oak plank of a ship.

THE SALT-MINES OF CARDONA.




CARDONA is a small but interesting town, scarcely known to geographers or even to the Spanish government, but it will repay the visit of the traveller who, in proceeding from France to Barcelona, takes the way of Seu Urgel instead of

the one by Perpignan, and after passing a fine forest of oak and hazel-nut will find this picturesque mountain-town lying between Solsona and Manresa. The mines are situated about three miles to the east of the town, and resemble a huge stone-quarry, about twelve miles in circumference. You descend by a flight of five or six broad steps cut in the rock on the north side. It is most truly an ocean of salt, for there is not the smallest particle either of mould or gravel. The Cardonera, a mountain stream not more than twenty feet wide, flows through the midst of the mine in a bed of salt, which looks almost like the work of human hands. For many miles of its course it deposits salt upon its banks, and the country people along its whole extent till its junction with the Llobregat, where it loses its saline qualities, use the water for culinary purposes in lieu of salt. Fine flocks of sheep feed on its banks.

On the left hand of the entrance into



Salt Hills at Cardona, in Catalonia



the mine is a wooden building used as a residence for the inspector. A sort of large cistern, excavated as far back as the reign of Charles III., for the purpose of ascertaining the depth of the mine, had been dug to the depth of above 150 feet, when a stop was put to the work. The salt, which lies exposed, consists of an enormous mass of rock of dazzling whiteness, and the blocks blasted in the mine are about the size of large building stones. When the sun throws its rays upon this mine, which is enclosed on three sides by mountains, the reflected light is as strong as that of the sun itself.

Numerous other beds of salt are found in these lofty mountains, but as they are overgrown with forests of pine, cork, and carob-trees, the salt does not lie so near the surface; no attempt, however, has ever been made to work them, nor indeed would it be required, as the mine of Cardona alone could supply for centuries the wants of the whole of Europe, without any apparent diminution of its resources. The salt contained in the mountains is not, however, white, being found of all colors, rose, scarlet, blue, green, violet, yellow, and brown of various shades, some veined like marble, and others again shining with a silvery lustre. On being pounded, every vestige of color disappears, and it becomes as white as that found in the mine. Attempts have been made to preserve specimens, but in a few years they fade and crumble to pieces. Those which have been constantly exposed to the weather possess greater permanence.

About two hundred men are employed in the mine. Their labor consists in blasting the enormous masses of rock salt, piling them up in exposed pyramidal magazines in the mine, rehousing those which have stuck from the action of rain-water, and loading the mules which are to convey the salt to the neighboring towns and the ports of Barcelona and Tarragona, whence it is exported to England and the northern states of Europe. A single handful of Cardona salt has twice the virtue of that obtained from the sea at Iviza and Cadiz, and yet, strange to say, the natives of Estremadura, Leon, Galicia, Asturias, Biscay, Navarre, and Old

Castile get their supply of salt from Portugal, nay, even from the English vessels, which bring it from the northern counties. If it be asked why half Spain does not avail itself of its own exhaustless treasures, the answer given is, that the Cardona salt, though of superior quality, comes dearer on the whole. Whence does this arise, seeing that the supply is so abundant? From no other cause but that there is no road to Cardona; and yet this pretty little town is but twenty leagues from the much-frequented harbor of Barcelona. The only access to Cardona is by a footway across the mountains, so narrow as scarcely to admit of two laden mules passing each other, and in fact, attended with so many delays and difficulties, that the journey takes six days, at the end of which the mules are so exhausted as to require several days' rest.

THE PULSE.



VERY one knows that among the numerous inquiries and examinations which precede the prescription of a careful physician, the state of the pulse is never omitted; yet as it is

probable that few of our readers are acquainted with the reasons for this inquiry, or, what is the same thing, with the facts to be learned from it, we think it may not be uninteresting if we enumerate some of the more prominent ones.

It is almost unnecessary to premise that by the pulse is meant the beat of an artery, and that the one commonly chosen for examination is the radial artery, which beats at the wrist. The first point generally attended to is the number of the beats; and since in this, as in all other medical questions, it is necessary to be acquainted with the state of health in order to recognise any deviation from it, we must mention the ordinary frequency of the pulse at different ages. In the newborn infant, it is from 130 to 140 in a

minute, but decreases in frequency as life advances; so that, in a middle-aged adult in perfect health, it is from 72 to 75. In the decline of life it is slower than this, and falls to about 60. It is obvious that if we could suppose a practitioner ignorant of these plain facts, he would be liable to make the most absurd blunders, and might imagine a boy of ten to be laboring under some grievous disease, because his pulse had not the slow sobriety of his grandfather's. A more likely error is, to mistake the influence of some temporary cause for the effect of a more permanent disease: thus, in a nervous patient, the doctor's knock at the door will quicken the pulse some 15 or 20 beats in a minute. This fact did not escape the notice of the sagacious Celsus, who says: "The pulse will be altered by the approach of the physician, and the anxiety of the patient doubting what his opinion of the case may be. For this reason, a skilful physician will not feel the pulse as soon as he comes; but he will first sit down with a cheerful countenance, and ask how the patient is, soothing him, if he be timorous, by the kindness of his conversation, and afterward applying his hand to the patient's arm.—(De Medica, lib. iii., cap. 7.*)"

Granting, however, that these sources of error are avoided, the quickness of the pulse will afford most important information. If in a person, for example, whose pulse is usually 72, the beats rise in number to 98, some alarming disease is certainly present; or, on the other hand, should it have permanently sunk to 50, it is but too probable that the source of the circulation, the heart itself, is laboring under incurable disease, or that some other of the great springs of life is irremediably injured.

Supposing, again, the pulse to be at 72, each beat ought to occur at an interval of five sixths of a second; but should any deviation from this rhythm be perceived, the pulse is then said to be irregular. The varieties of irregularity are infinite;

* The lapse of eighteen centuries has not destroyed the utility, much less the beauty, of the eight books on medicine bequeathed by Celsus to posterity; they are unrivalled for perspicuous elegance and laconic good sense. Celsus is one of the writers of the Augustan age, and is worthy of the times in which he flourished.

but there is one so remarkable as to deserve particular mention. It will happen sometimes that the interval between two beats is so much longer than was expected, that it would seem that one beat had been omitted; in this case the pulse is said to be an intermittent one. When the action of the heart is irregular, the beat of the pulse is so likewise; but it will occasionally happen that the latter irregularity takes place without the former one, from some morbid cause existing between the heart and the wrist. It is hardly necessary to observe, that in all doubtful cases, the physician examines the pulsation of the heart as well as that at the wrist—just as the diligent student, discontented with the narrow limits of provincial information, repairs to the metropolis to pursue his scientific inquiries.

The strength or feebleness of the pulse, its hardness or softness, and innumerable other qualities, might be discussed here; but from the great difficulty attending any examination of these points, and the technical niceties involved in anything more than a bare mention of them, we omit them. There is one point, however, which it would be unpardonable to pass over in silence: sometimes no pulsation can be felt at the usual part of the wrist. This may proceed from so great a languor of the circulation that it is imperceptible at the extremities; or from the radial artery (the one usually felt) being ossified; or from an irregular distribution of the arteries of the fore-arm.

ARTICLES OF DRESS.




HATS are not a modern invention as they were used by some of the ancient Greeks. In the time of Edward III. and of Richard II., white hats were

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MODELS OF DRESS.

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until the reign of Henry VIII. In the reign of Elizabeth, high crowns came in fashion, and were often pointed and conical. At that time hats were restricted by act of Parliament to the upper classes of society; the middle and lower class being confined to the use of knit caps. This act being repealed, felt hats came into common use. During the commonwealth, broad-brims were generally used. These being often inconvenient, it became the custom to turn up one or two sides, which led to the three-cocked hat, in the time of Queen Anne. About 1750, round hats being prevalent among the lower orders, the cocked hat was the distinction of a gentleman. About 1790, cocked hats were laid aside, and ever since round hats have been the universal wear.

SHOES were worn by the ancient Egyptians. Several Egyptian shoes are preserved in the British museum, made of matting, the bark of papyrus, leather, and other materials. Shoes were worn by the Greeks and Romans, although they generally wore sandals, which were merely soles tied on the feet with thongs. The most simple kind of shoes appear to have been a piece of leather bound round the foot; shoes of this kind are still used in the remote parts of the Highlands of Scotland. In the reign of Edward IV., shoes were pointed at the toes, and had long beaks of four or five inches, turned up and fastened at the knees by a chain. Afterward they were quite round at the toes, and in the reign of Charles I., the toes were square, and boots came only half up to the knee, with wide tops turned down. The leather of which shoes were made was of different colors. Blacking is a very late fashion.

GLOVES are not a modern invention. They were worn, as we are informed by Herodotus, by the ancient Persians; they were also in use among the ancient Romans. In the early ages of Christianity, gloves were a part of monastic costume, and in later periods formed a part of the episcopal habit. The glove was employed by princes as a token of investiture; and to deprive a person of his gloves was a mark of divesting him of his office. Throwing down a glove constituted a challenge, and the taking it up an accept-

ance; this custom continued until the reign of Queen Elizabeth.

STOCKINGS, as now made, are comparatively a modern invention. Previously to the time of Henry VII., knitted stockings of silk were unknown. "King Henry VIII. did wear only cloth hose," says Stowe in his Chronicle, "or hose cut out of ell broad taffata; or that by great chance there came a pair of Spanish silk stockings from Spain." Silk stockings were articles of great rarity in the time of Elizabeth. Stockings continued to be knit by hand until 1589, when a stocking-loom was invented by William Lee, near Nottingham. Lee, not being sufficiently patronized in England, removed to Rouen, in France, where he established his manufacture.

ECHOES.



THE word signifies a sound reflected or reverberated from a solid concave body, and so repeated to the ear.

The ancients, being wholly unacquainted with the true cause of the echo, ascribed it to several, which are whimsical. But the moderns, who know sound to consist in a certain tremor or vibration in the sonorous body, communicated to the contiguous air, and by that means to the ear, give a more consistent account of echoes. For a tremulous body, striking on another solid body, may evidently be repelled without destroying or diminishing its tremor; and consequently a sound may be redoubled by the resolution of the tremulous body of the air. In order to produce an echo, it would seem a kind of vaulting is necessary, in order to collect, and by collecting to heighten and increase, and afterward reflect, the sound; as we find is the case in reflecting the rays of light, where a concave mirror is required.

In effect, as often as a sound strikes perpendicularly on a wall, behind which is anything of a vault or arch, or even

another parallel wall, so often will it be reverberated in the same line, or other adjacent ones.

For an echo to be heard, therefore, it is necessary that the ear should be in the line of reflection; for the person who made the sound to hear its echo, it is necessary that he should be perpendicular to the place which reflects it; and for a manifold echo it is necessary that there should be a number of walls and vaults, or cavities, either placed behind or fronting each other. A single arch or cavity can scarcely ever stop and reflect all the sound; but if there be a convenient disposition behind it, part of the sound propagated thither being collected and reflected as before, will return another echo; or if there be another concavity opposed at a due distance to the former, the sound reflected from one upon another will be tossed back again by the latter.

Echoes are distinguished into different kinds. *Single echoes* are those which return the voice but once. Of these, some are *tonical*, which only return a voice when modulated into some particular musical tone; and others, *polysyllabical*, which return many syllables, words, and sentences. Multiple or *tautological* echoes, are those which return syllables and words oftentimes repeated.

At the sepulchre of Metella, wife of Crassus, there was an echo which repeated what was said five times. Authors also mention a tower at Cyzicus, where the echo repeated seven times. One of the first echoes we read of is that mentioned by Barthius, in his notes on the *Thebais* of Statius, which repeated the words uttered seventeen times; it was situated on the banks of the Naha, between Coblenz and Bingen. Barthius assures us, that he had proved what he writes, and had counted seventeen repetitions.

We subjoin an account of a remarkable echo detailed by a writer in the philosophical transactions: "As to echoes, there is one at Brussels that answers fifteen times. But when I was at Milan I took a coach to go two miles thence to a nobleman's palace, not now in great repair, and only a peasant (Contandine) living in one end of it. The building is of some length in the front, and has two wings jutting

forward, so that it wants only one side of an oblong figure. About one hundred paces before the house, there runs a small brook, and that very slowly, over which you pass from the house into the garden. We carried some pistols with us, and firing one of them, I heard fifty-six reiterations of noise. The first twenty were with some distinction; but then, as the noise seemed to fly way, and answer to a great distance, the repetition was so doubled, as you could hardly count them all, seeming as if the principal sound was saluted in its passage by reports on this and that side at the same time. There were of our company that reckoned above sixty reiterations when a louder pistol went off; and indeed it was a very grateful divertisement. But on the other side of the house, on the opposite wing, it would not sound; and only, to this advantage, in a certain chamber, here two stories high from the ground."

In the neighborhood of Edinburgh, are several remarkable echoes; and one author mentions hearing, in its immediate vicinity, the notes of martial music with the noise of viewless cannon thundering from the cliffs of Salisbury. Near the castle of Horn, in the county of Argyle, is a ruined chapel, opposite to which is a precipice, in the recess of which, if a person calls or speaks a sentence, an echo repeats it to one who stands near the cemetery of the chapel, clearly and unbrokenly. In the cemetery of the Abercorn family, at Paisley, in the county of Renfrew, there is an echo exceedingly beautiful and romantic. When the door of the chapel is closed with any degree of violence, reverberations are equal to the sound of thunder. Breathe a single note in music, and the tone ascends gradually with a multitude of echoes till it dies in soft bewitching numbers. If the effect of one instrument is delightful, that of several in concert is captivating—for it excites most tumultuous and rapturous sensations. Near the Cape of Good Hope is a rock called the "Honey Rock," which has an echo that repeats several syllables successively; and in a tower at Bahavia, is another which echoes nine syllables. A singular echo is also heard in Castle Comber, in Ireland. No reverberation is observed till the listener is within fifteen or sixteen feet of the ex-

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tremity of the grotto; at which place a delightful echo enchants the ear. The celebrated rock near Mulcross Abbey, sends forth the most fascinating reiterations. Sound a bugle-horn, echoes equal to a hundred instruments answer to the call. Report a single cannon, the loudest thunders reverberate from the rock, and die in endless peals along the distant mountains. On the lake of Keswick, a pistol is reported thirty times; and a quarter of a minute frequently elapses between each report. Echoes multiplied every sound in the grotto of Delphi, and increased the veneration which prompted thousands to visit the Temple of Apollo, the splendor of which, in marble and in statues of gold and silver, was for many ages unequalled in Greece. In Norway, and upon the lake Ontario, and in many of the West India islands, the echoes are enchanting; while among the Grisons there reigns an eternal silence. Clothed in a winding-sheet, not an echo repeats the fall of a torrent, or the ruins of an avalanche. In the baptistry of St. Giovanni del Montesino, there was an echo that repeated a note of music six times. Lucretius mentions one that repeated seven notes; and it is said that there is one echo, between Confians and Charenton, which repeats ten times. A few miles from Narbonne, the traveller is led by his guide to a bridge, beneath which is heard an echo which repeats twelve times; and Migron mentions one in a tower, below Lausanne, on the borders of the lake of Geneva, which repeated twelve syllables.

In times when men were less interested in the investigation of the causes of the phenomena they heard or saw, the echo must have exceedingly perplexed them. Were we permitted to indulge imagination, it would not be difficult to picture to ourselves the amazement and consternation with which an inhabitant of the newly-peopled earth would be seized, when he first heard the rocks far and near reiterating the broken sentences that escaped from his lips, as he wandered along by the banks of a river, or chased the deer in the mountains. There is much in external nature calculated to awaken the consciousness of invisible power, which resides in every virtuous bosom.

THE REIGN OF TERROR.



THE Reign of Terror! how many recollections of horror are associated with these words! Even at the distance of more than half a century, the imagination shrinks, the blood curdles at their sound; and centuries hence, that era will probably be regarded as exhibiting the "bloodiest picture in the book of time."

This name was applied to express that period in French history which intervened between the execution of Louis XVI. and the overthrow of Robespierre, to whom mainly it is supposed to have owed its origin. Some terrible scenes had previously been witnessed. In September, 1792, shortly after the overthrow of the monarchy, when the passions of the populace were excited to the highest pitch by the intelligence of the approach of the allied army, a band of assassins had at midday, while the assembly were sitting, proceeded to the various prisons of the metropolis, and there commenced the work of destruction on the inmates. These receptacles had previously been filled with hosts of the highest society in the capital, who had been collected, in terms of a law named that of "suspicion," after a search of three days, during which no one was allowed to leave his residence, but a body of delegated municipal authorities proceeded from house to house, and seized all who fell within its sweeping denunciation. Eighty monks, incarcerated in a temple, were first assailed, and most of them either struck down on the ground, or shot in the trees of an adjoining garden to which they fled for refuge. The great prisons of L'Abbaye, La Force, and the Conciergie, were the next objects of the assassins' fury, and in each the prisoners had their throats cut in hundreds. A sort of mock tribunal was established, and these homicides constituted themselves as judges. The wretched prisoner was brought out alone, and after a few questions from his accusers at one end of the court-yard, he was consigned to the knives of the assassins, who quickly des-

patched him at the other. Some telegraph or cant phrase was generally employed as the signal. At the prison of L'Abbaye, for instance, the fatal sentence was the "*à la Force !*" and while the unsuspecting prisoner went on in the supposition that he was to be transferred to that stronghold of incarceration, he was suddenly assailed and put to death amid the laughter of the assassins, who amused themselves with his fearful misapprehension. During three days these terrible scenes proceeded; neither the legislature nor the civic authorities, in the meantime, offering the slightest interruption. The assassins, who did not exceed two hundred in number, throughout the whole period coolly went and returned to their meals, as if they had been engaged in their usual avocations. The women were worse than the men, and either joined actually in the massacre, or stayed at home to discharge the others' duties, that their husbands might, as they said with horrid coolness, "work in the Abbey." Nay, more, when the horrid "work" was completed, they actually had the audacity to proceed to the city hall and demand payment for their deeds—a demand with which the approving or terrified municipality were forced to comply; and the sums paid to these murderous "laborers" for a long time remained a disgrace duly recorded in the civic records of Paris. It is impossible to calculate the number struck down on this occasion in Paris and Versailles, which, with one or two of the smaller towns in the neighborhood, followed the capital's example. By the most moderate calculation they have been reckoned a thousand or twelve hundred, though the list has been swelled to thrice the amount. Many persons of distinction fell during the massacre; among whom were the famous Madame de Barri, mistress of Louis XV., who died uttering the most piercing cries, and exhibiting the most abject, yet natural timidity, and the still more celebrated Princess de Lamballe, whose beauties and virtues had not been able to save her, as the friend of Maria Antoinette, from the fury of the mob. She was put to death under circumstances of peculiar atrocity, and her head was carried aloft on a pike, to be

exhibited before the windows of the queen in the Temple, attachment to whom seems to have been the least of her merits and the chief of her crimes.

But terrible as these scenes in 1792 were, far greater horrors were perpetrated—and in the name of justice, too—in the following year and the first half of 1794, by the sanguinary revolutionary tribunal which had been established by Danton. This dread triumvir himself perished by its agency in the early part of the last-named year, and while bewailing his fate, and that of an amiable woman, who a short time before had been united to him in marriage, he then deeply deplored his instrumentality in its erection, calling the Almighty to witness that he had never contemplated the crimes it had achieved: but his regret (as regret generally is) was unavailing. Shortly after its creation, the revolutionary tribunal commenced its proceedings with the most fearful rapidity, and under the direction of Fouquier Tinville—a sort of fiend in human shape, who laughed and jested with his victims while he sent them to the scaffold—whole hecatombs were soon destroyed. The slightest suspicion was fatal in the eyes of this atrocious wretch, and those who appeared in court as witnesses were frequently sent to the guillotine as criminals. Almost every one tried before him was at length condemned. The Girondists were struck down in a body, on the denunciation of Robespierre; the venerable Malesherbes, for defending the late king, was, with the whole of his family, consigned to the scaffold, to which he proceeded with a gay aspect, and an air so careless, that, chancing to stumble, he said, "it was a bad omen, and a Roman would have turned back." Danton and the whole of his associates were condemned, by the instigation of the same gloomy tyrant, who felt that that bold demagogue formed the chief obstacle to the dictatorship to which he now aspired. He exhibited less courage, and for a moment his feelings seemed about to give way, when he thought of his young wife, of whom he plaintively exclaimed, "I shall never see thee more!" but immediately recovering himself, and uttering the words "Courage, Danton!" he died with

fortitude. Others of a less daring temperament showed still more tranquillity; and death at last became so common that it lost its terrors. Numbers proceeded to the guillotine uttering jibes and witticisms, often extemporaneous, but in other instances studiously prepared for the occasion; and the victims at last vied almost in coolness with the crowds, who daily beheld processions to the guillotine with as much indifference, or rather as much zest, as they would have regarded any exhibition at the theatres, which were never more crowded in Paris than during this dismal period.

While such was the state of affairs in the capital, matters were still worse in the provinces. In Paris, condemnation was made a jest, and the names of those who had received sentence were bawled out in a street list, named, with disgusting levity, "the evening paper," from which they frequently, for the first time, received intelligence of their approaching death on the morrow, or were said to have "drawn prizes in the holy lottery of the guillotine;" but in the rural districts, execution itself was made a theme of merriment. In the north, one Lebas, an apostate monk, the revolutionary judge, generally presided at the guillotine with the whole of his friends; and in the south, another, Le Bon (literally, "the good," and probably a name bestowed in jest), publicly entertained the executioner, as a distinguished functionary, at his table. Horrors scarcely inferior were perpetrated in the other districts of the republic, to which these sanguinary wretches were sent by the revolutionary tribunal in Paris, delegated with all its powers; and the guillotine at length became so much in demand, that it was proposed to have a set of what were termed "perambulating" machines of death constructed, to move from one part of a province to another, on wheels. Every being, who, by his opposition or his wealth, had excited the indignation or cupidity of these emissaries, was guillotined. Were an old public functionary incorrect in his accounts, or a general unsuccessful with the enemy, he experienced the same fate. Westermann, a fierce republican general; Biron, a better soldier; Beauharnois, the husband of the amiable Josephine, Napo-

leon's future empress, and others of the same rank, were thus struck down; and the dreadful instrument was at last so familiarized, under the auspices of Fouquier Tinville, that Robespierre himself had to interfere, and declare "it was desecrated."

But even these scenes yielded in horror to the enormities committed in the western part of the kingdom on the unhappy peasantry of La Vendée. Shortly after the revolution broke out, resistance arose to it there. The inhabitants of that sequestered district, where the proprietors, generally inconsiderable, lived chiefly on their own domains, had escaped the severity of the ancient government. Instead of being ground down by the nobles, they lived on a footing of comparative equality, joining in their hunting parties, and participating in their hospitality; most of the proprietors cultivated their own grounds, or were but little removed in rank above their tenants. Here, accordingly, the new principles met with a steady opposition. Encouraged by their landlords, who were attached to the ancient régime, and instigated by their priests, who were averse to the modern oath, the peasants took the field in bodies, and resisted all who attempted to introduce revolutionary doctrines into their district. Success at first attended their arms. Their habits as hunters having made them experienced marksmen, and their knowledge of the country given them a great advantage over their opponents, they in the outset bore down the republican troops, who, while marching unsuspecting through the forest ravines with which the district teemed, were frequently fired on by unseen foes, and while in confusion, struck down by the peasants, who then rushed from their ambuscade. Whole bodies of men were thus cut off; and the insurgents, becoming bolder by success, and assembling in larger numbers, at last defeated not only several republican generals, but captured Nantes and some adjacent towns. Under the direction of Larochejacquelein, a young and enthusiastic nobleman; Charrette, a waggoner; Stofflet, a barber; Lescur, a pious gentleman; and D'Elbée, an old naval officer, they at last attempted higher aims, and in a body a hundred thousand strong, crossed the Loire with

the design of marching upon Paris. But all their habits and tactics unfitted them for this purpose. They generally took the field for fighting in the same form as they had been accustomed to equip themselves for hunting; seldom carried above three days' provisions with them; and, whether successful or defeated, could rarely be retained for a longer period from home. In conflict, too, they were more successful in sudden and sharp attacks, than qualified to endure the steady and sustained action of regular troops. Hence, in this great excursion, they wholly failed in their object. In several engagements with the republican troops, after varied success, they were finally defeated; Larochefoucauld, their favorite, though not ablest leader, was struck down, and his followers fled, notwithstanding his inspiring war-whoop, "If I fly, shoot me; if I advance, follow me; if I fall, avenge me!" Most of their other generals, being accustomed to charge with their men, were either killed or disabled; and their wives and children having followed them in this excursion, a crowd of a hundred thousand wretched beings were at last found, defeated, dismayed, and disordered, on the banks of the Loire—assailed by the exasperated republicans on the one hand, cut off from their country by the river on the other; abandoned a prey to hunger, cold, wind, hail, and snow; and left to contend with horrors which disposed their superstitious imaginations to surmise the approaching termination of the world in their sinking cause.

It was upon these unhappy wretches, or such of them as had escaped those dangers, that the Jacobin fury was now to be wreaked; and though the peasants themselves had frequently been cruel in putting their prisoners to death, assuredly they never perpetrated such atrocities as those of which they were now the victims. An instrument which, like the guillotine, decapitated only one at a time, was of course wholly unable to act with sufficient promptitude for vengeance; and they were accordingly struck down in scores, and fifties, and hundreds, by musketry and grape-shot. Neither age nor sex was spared on these occasions, though the soldiers, the stern executioners, were fre-

quently interrupted by their victims, when children, clinging to their knees. But even this mode of putting them to death became too tiresome at last; and when the earth was threatened with a pestilence from their putrifying carcases, Carrier, an ex-friar, but now revolutionary pro-consul at Nantes, devised a more horrible plan for destroying them by water. Bands of wretched beings were conveyed in boats, and thrown into the lakes or rivers; and when some of them escaped, or attempted to escape, by swimming, the infernal expedient was chosen of carrying them out enclosed in vessels constructed with false bottoms and closed hatchways for the purpose, when the trap being withdrawn, the waters closed over all. Thousands were thus inhumanly drowned, and these *Noyades*, as they were termed, at last only ceased when the fishes were poisoned by gorging on human flesh, and the waters became not less pestilential than the air.

The public mind at last sickened under these accumulated horrors, and Robespierre's associates in the capital became alarmed by the apprehension that he designed to destroy them in turn, with the view of appropriating power to himself alone. The government of the country had, on the abolition of the monarchy, been vested in two committees—one of which, the committee of public safety, watched over the general interests of the republic; while the other, named that of general safety, was intrusted with the superintendence of Paris alone. It was chiefly in the municipality that the interests of this body lay; but though confined to the capital, and made subservient to the committee of public safety, it had gradually extended its power, and by means of the affiliations or offshoots of the Jacobin club, which were dispersed over every village, acquired an influence throughout all France. And this was the body which Robespierre designed to render instrumental to his views when he had been dismissed from the committee of public safety, in conformity with a law which enjoined that two of the ten members should go out every two months in rotation, or when he had refused to re-enter it in consequence of some quarrel with his colleagues.

To all it was apparent that a death-struggle drew nigh, and both parties prepared for it with the full conviction that their lives were dependent on the issue. The committee trusted to the influence it possessed with the army, whose movements Carnot, the ablest and best of its members, wholly controlled: Robespierre confided in the support of the municipality, and, above all, in that of the Jacobin club. In the convention his power was also great; for that body invariably joined the stronger party, and it had recently supported a law which he brought in chiefly to justify the late massacres, and after passing which he had retired for a month from power, in order, as was supposed, to depopularize his colleagues by the odium of executing it. But this stratagem failed, if it were ever designed, and his retirement proved as fatal to him as a similar retreat had been to Danton. That bold leader of the populace had fallen a victim chiefly to the artifices which Robespierre had employed to undermine him at the Jacobins' in his absence: and he had died exclaiming that in three months his deceiver would follow him to the block. The prediction was fulfilled: the committee of public safety seized the same opportunity to destroy Robespierre, and with the same success. On the 26th of July, 1794, after a month's absence during which his followers had almost worshipped him as a divinity, he reappeared in the convention, and delivered one of those long, mysterious, and ominous addresses with which he was accustomed to usher in his sanguinary proposals. The assembly, slavish as ever, applauded him to the echo as before; but a different reception awaited him when he next day prepared to impeach three of his late associates in the committee of public safety, and several of their adherents in the chamber. These men had in the interval received intelligence of his intentions, and they prepared to defend themselves with the courage of despair. So soon as he renewed his speech, they boldly interrupted him by their hostile acclamations, and Robespierre's voice, for the first time, was silenced in an assembly where it always before had been heard with reverence inspired by dread. The chamber at first

stood mute, like himself, with astonishment; but as the cries of his foes grew louder, and vociferations of "Down with the tyrant!" were heard, it prepared to adopt another course; and when Barrère, a profligate ex-noble, and member of the committee of public safety, who invariably ranged himself with the stronger, and on this occasion had prepared a speech for either side—drew from his pocket and coolly proceeded to deliver a studied report against Robespierre, the cowardly legislature no longer remained uncertain, but fiercely joined in the halloo that struck him down. Foaming at the mouth, Robespierre withdrew, and hastened for safety and succor to his adherents in the municipality and Jacobin club.

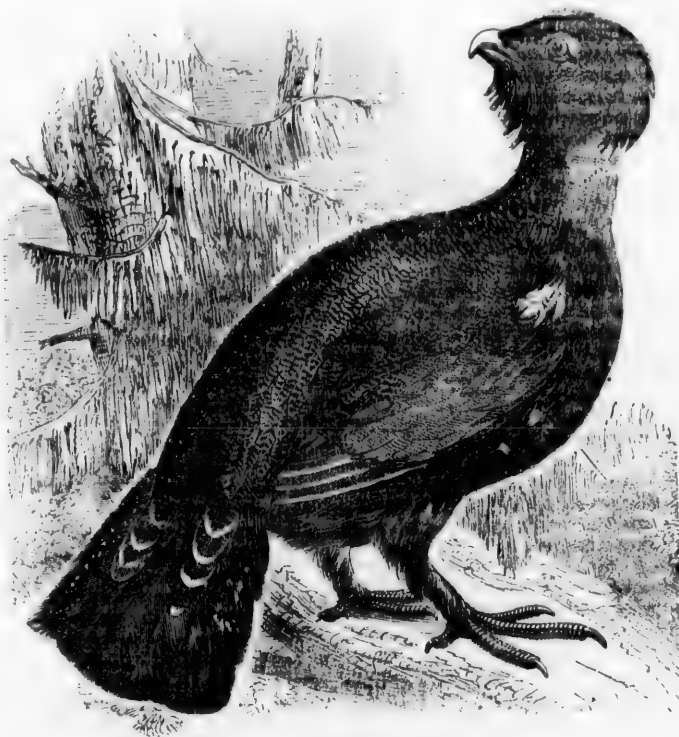
But it was too late. His enemies knew that either his life or theirs must be extinguished in the struggle, and one or more of them had attended the chamber with the resolution of destroying either him or themselves if he carried his proposal. "Should it pass," said they, "we shall have no alternative but to blow out our brains;" and the legislature was soon convinced that its own members were in similar danger. A decree was quickly passed to outlaw him; but there was difficulty in getting parties to execute it; for Henriot, the commander of the Parisian guard, was an adherent of Robespierre's, and already at the town-hall by his side. But fortune, or the frailty of this associate, aided them. Henriot, when he attempted to take the command of his troops, was so inebriated that he with difficulty retained his seat on horseback, and his soldiers either misunderstood his orders or refused to obey him. In these circumstances he rode back in dismay to the city-hall, and his cannoneers were easily persuaded by some members of the legislature to turn their guns from against it to the hostile edifice. A few adherents of the committee or chamber accompanied them, and boldly burst into the room where Robespierre and his associates were. Their triumph was easy: the confederates attempted no resistance; but some of them endeavored to escape by the windows, while others essayed to avoid a public execution by suicide. St. Just, a violent but disinterested fanatic, made this attempt

and failed; his pistol snapped in the act, and was seized before he could renew the effort. Couthon, a sanguinary wretch, who, though half dead with palsy, talked of death and murder in the blandest accents, had not courage to attempt it; and Robespierre's jaw was only shattered by a shot, but whether from his own hands or another's is uncertain. Henriot threw himself from a window, and was found concealed in a sewer. The younger Robespierre, a comparatively innocent man, whose affection for his brother alone betrayed him into danger, was one of the few who conducted himself with dignity, and prepared to die with tranquillity. The whole, amounting to about forty in number, were conducted to the hall of the convention, whence, being already outlawed, they were the next day sent to the guillotine. Robespierre passed the night on a miserable bench in a room adjacent, but though suffering with agony he refused to utter a single word. Next morning, amid the cheers and curses of the populace, among whom were many friends of his recent victims, he was conveyed to the scaffold; and though a momentary outcry escaped his lips when the executioner coarsely tore the bandage from his fractured jaw, he died, the last of his party, with fortitude. With his life the Reign of Terror terminated; and the convention, by whose abject submission it had mainly been caused, shortly afterward made way for a different set of men, and another order of things. The revolution, however, with its gloomy and appalling scenes, did not pass away without teaching mankind these invaluable lessons—that religion is essential to the prosperity of states, and that it is the interest as well as the duty of those in power to promote by all means the happiness of the people.

THE STUDY OF NATURE.

It is impossible that any person, however thoughtless, and unaccustomed to observe the works of creation, can look around him, even during a morning's ramble through the fields, without being struck with the number of living beings that

offer themselves to his notice, presenting infinite diversity of form, and obviously adapted, by their construction and habits, to occupy various and widely-different situations. The careless loungeur, indeed, untaught to mark the less obtrusive and minuter features of the landscape, sees, perhaps, the cattle grazing in the field; watches the swallows as they glance along, or listens with undefined emotions of pleasure to the vocal choir of unseen feathered songsters; and content with these symptoms of life around him, passes unheeding onward. Not so the curious and enlightened wanderer, inquisitive to understand all that he finds around him: his prying eye and mind intelligent, not only can appreciate the grosser beauties of the scene, and gather full enjoyment from the survey, but perceive objects of wonder multiply at every step he takes: the grass, the trees, the flowers, the earth, the air, swarm with innumerable kinds of active living creatures: every stone upturned reveals some insect wonder; nay, the stagnant ditch he knows to be a world wherein incalculable myriads pass their lives, and every drop to swarm with animated atoms, able to proclaim the omnipotent Designer loudly as the stars themselves. Is it upon the seashore that the student of nature walks? Each rippling wave lays at his feet some tribute from the deep, and tells of wonders indescribable—brings corallines and painted shells, and a thousand grotesque beings, samples left to show that in the sea, through all its spacious realms, life still is found—that creatures there exist, more numerous than on the earth itself, all perfect in their construction, and although so diversified in shape and attributes, alike subservient to the general welfare. And yet how few, even at the present day, turn their attention to this wondrous scene, or strive at all to understand the animal creation—to investigate the structure and contrivance that adapt each species to perform certain important duties—to perceive the uses and relations of each group—to contemplate the habits and the instincts that direct the different tribes—and lastly, to trace out the means whereby the mighty whole, formed of such diverse parts, is all along preserved in perfect harmony!



Capercaillie, or Cock-of-the-wood.

THE GROUSE OF EUROPE.



FEW European birds have more points of interest in their history, than those to which we now invite attention. We allude to the grouse strictly so called, excluding the partridges and quails, &c., which Linnaeus associated with them in one genus under the name of *tetrao*. Dense pine-forests are the abode of some, others frequent the wild tracks of heath-clad moor-land, while the patches of vegetation

scattered among the high rocky peaks of the bleak mountain afford a congenial residence to others. Patient of cold, and protected during the intense severities of winter by a provision which we shall presently more particularly detail, they relieve by their presence the sternness of the frozen solitude, from which other birds have retired, and give animation to the most desolate scenery.

Their food consists of the tender shoots of pines, the seeds of plants, the berries of various species of *vaccinium*, and *arbutus*, the buds of the birch and alder, leaves and grain. In their habits they are polygamous. As the breeding season draws on, the male birds choose each for

themselves a certain territory, from which the possessor drives every intruding rival. Desperate combats are then continually taking place, the weaker or less fortunate being obliged to quit the precincts of the station; and it not unfrequently happens that the contest terminates only with the death of the defeated. Secure in his temporary dominion, the proud victor raises a call of invitation morning and evening, which resounds through the wood, and brings his bevy of mates to the selected spot. The nest is very simply constructed, consisting of dried grasses, and placed upon the ground, sheltered among the herbage.

In their flight the forest grouse are rapid for short distances, but the motion of their wings is accompanied by a whirring noise, like that of the pheasant. The scarlet-fringed skin above the eye, so peculiar an ornament in the grouse-tribe, they possess in great perfection; the beak is stout, short, and convex; the nostrils are hidden beneath a tuft of close small feathers, enveloping the base of the upper mandible.

Two species of this genus are indigenous in the British islands. One is the black grouse, common in the pine-woods of Scotland, and of the northern counties of England, and elsewhere; the other, is the capercaillie, or cock-of-the-wood. Formerly in Ireland, and still more recently in Scotland, this noble bird, the most magnificent of the whole of the grouse-tribe, was abundant in the larger woods; indiscriminate and wanton slaughter, and an unremitting system of harassment, have caused its extirpation. It still abounds in the pine-forests of various portions of the north of continental Europe, such as Sweden and Norway. Selby informs us, that "the last individual of this species in Scotland was killed, about forty years ago, near Inverness."

We shall now proceed to the next European group, that of the ptarmigan-grouse, or genus *lagopus*. Of this group two species are exclusively indigenous in the British island, namely, the common ptarmigan (*lagopus mutus*), and the red-grouse, or moor-game (*tetrao Scoticus*). The common ptarmigan is not only a native of Scotland, but of the higher latitudes of

continental Europe, where the willow-ptarmigan and the rock-ptarmigan, &c., are also abundant. In their manners, the ptarmigans mutually resemble each other. It may be observed, however, that in Scotland (a comparatively temperate climate) the bare and bleak mountains are the permanent abode of the species there indigenous; while, under the intense severity of winter in the polar circle, they all quit the more exposed situations and seek the willows and copse-woods which border the rivers, and stretch over the sheltered vales. Mountain-berries and heath-shoots in summer, spring-buds and leaves in winter, constitute their food, in search of which, as well as for the sake of shelter, they burrow beneath the snow. Perhaps the changes of plumage in none of the feathered races are more worthy of attention than those which the ptarmigans undergo. Their full summer plumage is of a yellow, more or less inclining to brown, beautifully barred with zigzag lines of black; their winter plumage is pure white, except that the outer tail-feathers, the shafts of the quills, and, in one species, a streak from the eye to the beak, are black.

The red-grouse or moor-game, undergoes no change of color like the ptarmigan; it however acquires a greater mass of clothing, and its legs are more covered with hairlike feathers in winter than in summer. It would seem either that its native districts, the wild heathy moorlands of the British islands, afford more shelter than the favorite localities of the ptarmigan, or that its system needs not this change in order to enable it to resist the cold. It is somewhat singular that this beautiful bird should not be known on the continent, abundant as it is on the moorlands of Scotland, England, and Ireland. Its value, as game, need not be pointed out. Our readers must not suppose that the two forms of grouse to which we have alluded are all that exist; on the contrary, as in every other group of nature, there are here also some which lead off (or indicate affinities) to other groups, forming links in the chain of being. Of these we may allude to the *uropasianus* of North America, and the sand-grouse (*pterocles*) of the arid stony tracts of Turkey, Spain, and Africa.

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THE LOVE OF LIFE, ITS USES AND LIMITS.



HE love of life may be justly reckoned one of the strongest principles in our constitution. It operates under every variety of circumstances, and with a power and energy peculiarly its own. "It corresponds," as has been truly said, "in the animated world, with the great principle of gravitation in the material system, or with the centripetal force by which the planets are retained in their proper orbits, and resist their opposite tendency to fly off from the centre. The most wretched, not less than the most prosperous—those who seem to possess nothing that can render life desirable, not less than those who are surrounded by all its pleasures—are bound to life as by a principle of central attraction, which extends its influence to the last moments of expiring nature."

It is, perhaps, not sufficiently considered how much we owe to this strong constitutional sentiment. The love of life! It is the arm that guards the temple of our being. It is the wall of fire that surrounds our earthly existence. It is the sentinel, ever wakeful, ever at its post, giving notice of the first approach of danger, and summoning all the sister powers to aid and action. But for the strength of this instinct, can we doubt that the number would be anything but small of those who, not influenced by higher and more sacred considerations, would seek a shelter from the calamities of the present scene in the grave of the suicide? Besides, the anxiety we feel for the continued health and protracted existence of those whom Providence has consigned to our care, would be extirpated; for what we felt of little consequence to ourselves, we would cease to wish for in the case of others. The absence of this ardent attachment to life, or even its existence in a feeble state, would thus tend inevitably to impair all our kindly and generous sympathies, make affection a meaningless word, and leave the weak and the helpless of every class without friends and without guar-

dians. Did we, moreover, cease to prize our being as a boon of peerless price, one great motive to industrious exertion would be destroyed; the sweat of our brows we would regard as too dear a price to pay for our daily bread; many of our noblest enterprises would never be undertaken; and the arts and sciences, the main object of which is to exalt and embellish life, would cease to be cultivated, or at least they would be cultivated with little care. And then what a scene of crime and consequent wretchedness would our world be, if composed chiefly, or rather exclusively, of idlers!

The restraints of law, too, would be stripped of more than half their power. The minds of men, losing the horror with which, instinctively, they recoil at the deed of the assassin, would regard the invasion of life as a crime of comparatively small moment, and thus society would be deprived of one of its most important safeguards. In a similar ratio, and from a like cause, war, even at present a dire evil, would increase—that "game which," to employ the words of the gentle Cowper, "were their subjects wise, kings would not play at," would become the universal pastime. We can, in truth, conceive few calamities more dismal than the extinction, could it be effected, of the dread with which death is contemplated by the mind of man. The arrangement is beautiful and wise, that death should be the "king of terrors."

The love of life, too, has its religious uses. It furnishes a strong presumption of our immortality. It proclaims the horror with which we recoil from the idea of annihilation. It whispers to us that some part of us is far too good to be consigned to the dust. It is, in fact, the voice of the soul, announcing its own grandeur and indestructibility.

Life is dear to us for a thousand reasons. We cling with intense fondness to the familiar objects around us: they become, in truth, a part of ourselves, and it costs the heart a violent wrench to be torn from them. The fair, blue heavens—the royal sun—night, with its twinkling stars—the landscape, with its charms—ocean, sleeping in beauty or lashed by tempest—the scenes of childhood and youth—the

faces around our hearth—it is not poetry, reader, it is nature that bids us prize the boon of being:—

"For who, to dull forgetfulness a prey,
This pleasing, anxious being o'er resigned,
Left the warm precincts of the cheerful day,
Nor cast one longing, ling'ring look behind?"

But the love of life has its limits as well as its uses. It may be vanquished; it may be expelled the bosom by higher and more powerful sentiments. The human family were defamed when a certain authority declared, "All that a man hath will he give for his life."—"Your master," said the brave Carmathian to those who waited on him, "is at the head of thirty thousand soldiers: three such men as these are wanting in his host;" while, at the same time, accosting three of his champions, he commanded the first to plunge a dagger into his breast, the second to leap into the "Agris," and the third to cast himself headlong down a precipice. His orders were instantly, and without a murmur, obeyed. In this and kindred incidents, we see the love of life giving way to another, we would say a more exalted sentiment.

But there are other and far higher displays of this mastery. We see it conquered often by the thirst for knowledge, especially when that is associated with the thirst for distinction. There is a numerous, and in many respects a noble class, who enrich their understandings at the expense, may we not say the sacrifice, of their existence. There are intellectual martyrs, even as Galileo was, when sickening in his dungeon for maintaining that our globe was not the centre of the planetary system. There are men whose devotion to study is maintained at the peril of life. They realize the words applied to Henry Kirke White by a brother poet:—

"He nursed the pinion which impelled the steel."

They are sad comments on the wise man's statement—"Much study is a weariness of the flesh." Is it too much to say that these have conquered their love of life, or at any rate, got it subordinated to other ends? By no means. We are told of Achilles that he had two alternatives set before him—to die covered with glory won on the plains of Troy, or to pass a long life without renown in the

place of his nativity. We can conceive of such an alternative having been submitted, at the commencement of their intellectual career, to some as illustrious for genius as the hero of the Iliad was for feats of arms. We can conceive the question proposed to many whose names are now identified with the most brilliant intellectual achievements of our kind, whether they would go to an early grave, or lose those delights and those honors, which scientific research, the labors of art, or the flights of imagination, would be sure to win for them. And we plead that the former alternative would have been preferred. Would Milton have sacrificed, for a paltry addition of twenty years to his tack of life, the superb visions that crowded thickly on his soul while he meditated his great epic, and gave it to the world in the proud consciousness, as he said, that posterity "would not willingly let it die"? Would Newton have changed ages with Methuselah, if his nine-hundred and ninety-nine years had cost him the glory of the discoverer of gravitation? Would Byron, though skeptical of another world, have "ripened hoar with time," and for this have been contented to go down to the dust, leaving no name that "made an epitaph"? Would Franklin have sacrificed his fame as the man who "sketched the constitution of a continent with one hand, while with the other he drew the lightning from the clouds," for ages of inglorious ease? The tenacity with which we cling to existence is indeed strong; but we do not hesitate to say, that in minds of the higher order, the love of knowledge, when, especially, it is associated with the thirst for renown, is still stronger.

Then the love of life is frequently mastered and displaced by the affections; we allude to the benevolent and patriotic emotions, but more especially to our domestic sympathies. We allow, indeed, that in cases such as those we are about to mention, there may be a mixture and conflict of motives—a portion of alloy mixed with the pure gold. But what of it? Our admiration of mankind will be limited indeed, if we accord it to none of their actions save those that flow from motives quite unadulterated. This apart then, we

find that the love of life often yields to purer and more exalted affections. The gallant seaman, braving the lash of the tempest or the scorplings of the fire alone, that he may rescue the tenants of his bark from a grave in the deep—the devoted soldier, interposing his own person and receiving the stroke that would have killed his leader—the patriot facing the dangers of the field that he may protect the honor and independence of his country—the Christian missionary, toiling and dying in the sublime cause of the world's evangelization—these, and such as these, attest that the love of life, however strong, may be conquered. So that, while the names of Leonidas, of Wallace, and of Tell, adorn the page of history—while those of Howard and other benefactors of their race live in the memory of mankind—while the "Martyr of Erromango" is not forgotten, we shall not want proof of this.

Then there are what we have called our domestic sympathies. One page of Roman story tells us of two friends, Damon and Pythias, whose attachment was so heroically strong, that either of them could have died for the other: here the love of life was subdued by the ardor of friendship. The case of the citizens of Calais will also suggest itself to the mind of the reader. And, to speak more directly in reference to our domestic sympathies, where is the mother who would not brave death to snatch the infant of her bosom from impending destruction? where the father who would not peril his own life to save that of his son? or the brother who could endure an existence purchased by pusillanimous exemption from a danger which proved fatal to a sister? Exceptions there may be; still, we plead, the rule is on that side most honorable to our nature.

Attachment to principle, too, will dethrone the love of life. We need not name the thousands who have not "reckoned their lives dear to them," for the testimony they held—the noble army of martyrs, who

"Lived unknown,
Till persecution dragged them into fame,
And chased them up to heaven."

They braved the lion, they dared the stake,
they quaffed the boiling lead, rather than

prove recreant to the cause of sacred truth. Their scorn, shall we call it, of life, was noble, when, to have preserved it they must have parted with what was far dearer to them—a good conscience.

It is beautifully and wisely arranged, that our attachment to life should be ardent; but it would be dishonoring to us to suppose that it can not be surmounted. We have, in these remarks, endeavored to indicate both the uses of this great law of nature, and also its limits.

THE CITY ON THE SEA.

IN Venice Tasso's echoes are no more,
And silent rows the songless gondolier;
Her palaces are crumbling to the shore,
And music meets not always now the ear.
Those days are gone, but beauty still is here,
States fall, hearts fade, but Nature doth not die,
Nor yet forget how Venice once was dear,
The pleasant place of all festivity.
The revel of the earth, the masque of Italy
But unto us she hath a spell beyond
Her name in story and her long array
Of mighty shadows, where dim forms despond
Above the dogeless city's vanished sway.
Ours is a trophy which will not decay
With the Rialto; Shylock and the Moor,
And Pierre, can not be swept, worn away,
The key-stone of the arch, though all wercs o'er—
For us repeopled were the solitary shore.

BYRON'S CHILDE HAROLD.



T may be said with equal truth of empires, that which a very high authority has said of man. We all do fade as a leaf, and the various dynasties of time which have blazed, waned, and expired, do all attest the fact. But

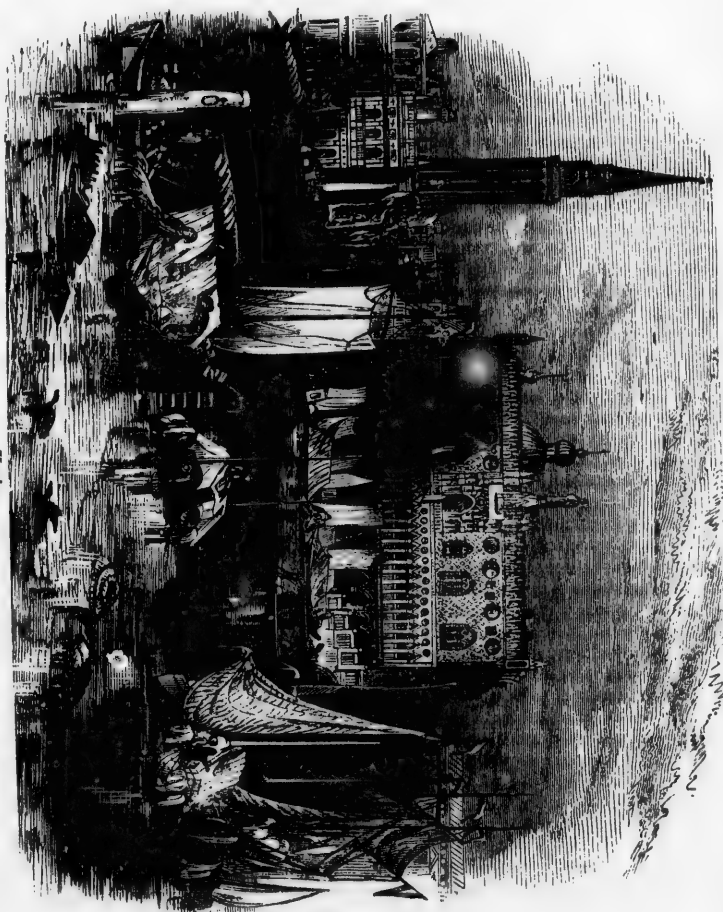
there is a view of the analogy which is very seldom taken; and if empires fade, they fade as a leaf, they do not die. Nothing in nature dies—the leaf which falls to the ground may appear to be an insignificant thing, and as it perishes from human observation, it may excite no interest or attention; but we are stating nothing which our readers have heard for the first time, when we remind them that the leaf does not perish. With thousands and myriads of its fellows it is carried along, and thus contributes to the forma-

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tion of the mighty deltas which are to be the future empires of the globe. And empires can not be said to die. How many instances does history afford to our minds of the relics of the empire escaping from the cruelty of the conqueror's sword; emigrating to other lands, and founding there a city, perhaps an empire, which has rivalled their ancient birthplace. We are told, though certainly the account seems somewhat fabulous, how the bark of Brutus or Briutus, after the conquest of Troy, breasted the waves and rode in triumph over the stormy billows, and landing on an uncultivated part of the coast, founded there a colony, which took his name, and eventually became the seat of commerce and glory, the island of Britain.

This certainly seems not an improbable tale, but be it as it may, thus was Venice founded. When the Visigoths, under Alaric, poured down from their mountains upon Rome, spreading around them death and destruction, a few refugees escaped, and in the lagoon or mouth of the Adriatic, built a city which commanded the admiration of all Europe, and held at once the sword of state and terror.

It may be as well, before we pass to a slight sketch of the city to notice the chief cause which contributed to its far-famed independency, to which indeed we have already adverted when we mentioned the lagoon. The Adriatic gulf receives in its southern part all the waters which flow from the southern declivity of the Alps from the Po, which has its source in the Cottian range, and collects all the waters of Piedmont and Milan to the Lisonzo, which originates in the mountains of Carniola. The estuary of the most southern of these rivers is above thirty leagues distant from that which lies furthest northward, and between these extreme points, the gulf receives the waters of the Adige, the Brenta, the Paiva, the Livenza, the Lemene, and the Tagliamento, as well as many other streams of less importance: every one of them carries down in the rainy season immense quantities of mud, sand, etc., etc.; so that the head of the gulf, gradually piled up with these deposits, is neither sea nor land. This vast estuary is called the lagoon: it comprises a space between twenty and thirty miles

from the shore, and is inaccessible to tempest and storm, though the wild waves of the sea burst with fury against the shores. Amid the tortuous channels of the lagoon, the pilot finds no pathway unless long experience has taught him its varied windings. Yet amid these shoals and mud banks, there have been from ages the most remote, individuals who have found a home on some sites which appear to be firmer and more staple than others, and here Venice eventually raised her glory and renown. In tracing the history of this republic, the empire she had over the sea is clearly distinguished. In the year 558, she possessed a considerable navy of galleys. Gibbon remarks that her marriage with the Adriatic was contracted in early infancy, it originated in the reign of Ziani, one of her doges. Pope Alexander Barbarossa, had taken refuge at Venice, and was protected by the state. The emperor sent a considerable fleet against it, which, under the command of his son Otho, in an obstinate engagement that ensued, the Venetians were victorious; Ziani returned in triumph with thirty of the emperor's vessels, and Otho a prisoner. The shore was crowded with the inhabitants—the pope came attended by the senate and clergy, and embracing Ziani, he addressed him as follows: "Take this ring, use it as a chain to retain the sea henceforth in subjection to the Venetian empire, espouse the sea with the ring, and let the marriage be solemnized annually by you and your successors to the end of time, that the latest posterity may know that Venice had acquired the empire of the waves, and that the sea is subjected to you as a wife to her husband." This speech, certainly a very foolish one, to say the best of it, elicited the greatest applause, and the ceremony of the marriage was performed every year until the French terminated the mummerly in 1798. Yet on many occasions through her history, Venice manifested her power on the ocean. In 804 they employed large ships-of-war, with which they repulsed Pepin the son of Charlemagne, who himself confessed their sovereignty. The following century they had three-masted square-built ships, carrying from 1,200 to 2,000 tons. At the period of their greatest prosperity

in the fifteenth century, they had thirty-three ships-of-war, besides merchantmen; 36,000 seamen, and 16,000 artificers employed in the finest arsenal then in Europe—they first acquired a lordship of Dalmatia, and pursued subsequently a steady course of aggrandizement. The fourteenth century was remarkable for the straggle between the Venetian and Ligurian republics, which threatened at one time to reduce the Roman empire to a province of Genoa, and to annihilate the trade, and perhaps the existence of Venice. Venice was reduced to the lowest ebb after the battle of Pola, and the taking of Chioza on the 16th of August, by the united armaments of the Genoese and Francesco di Carrara, when she called from her dungeons the only man able to save her, and he did save her. Confined by the ingratitude of his country, he nobly and magnanimously forgot the wrongs he might have avenged—this man was Vettor Pisani. The Venetians conquered the Genoese, and on the 24th of June, 1380, the doge Contarini made his triumphal entry into Chioza.

To trace the dignity to which it attained in the fifteenth century, its accessions to mighty power, and the envy it excited in the courts of Europe, requires a greater space than can be allotted to this article; and as many of the more interesting of its historical features will pass the eye in surveying its public buildings, we may pass through the period of its greatness, to the era of its declining power, and the conquest by the French republic, when it fell without a struggle for its liberty. One of the most singular features in the Venetian history, is the inquisition of state—that corrupt and despotic government, which, under any other name than that of republic, would have been regarded with universal execration. Imagination fails in endeavoring to conceive a council who carried on their deeds of darkness with such privacy. The bridge which led to these awful dungeons and chambers of gloom, was called the Bridge of Sighs. Would you visit the supreme council chamber, endeavor to imagine a room wide and lofty, black tapestry hanging all around it, and the ceiling covered with terrific figures from the pencil of Tintoretto, depicting the various virtues, bearing in their hands the instruments of torture used by the tribunal.* Oh, what scenes has this room witnessed! how many innocent victims to caprice and revenge have suffered here! There are two doors to this apartment, one through which the prisoner was conducted to the tribunal—one through which, if guilty, he was conducted from it. These chambers were opened by the French government, immediately upon the surrender of the republic, as well as the dungeons beneath. These dungeons are entered by a trap-door, and a chilly dread creeps over the heart, as one remembers the fate of thousands of those who entered these dread abodes. Vaulted passages, where neither light nor air can penetrate—rooms whose vaults and roofs are cased with iron, each with its broad wooden board, serving at once the purpose of chair, table, and bed, and the apartment terminating the series of dungeons, from which, if a prisoner once enter, he returns no more—the room where he was strangled, the room whence his body was cast into the canal beneath.

This government of Venice consisted of a doge, who was an elected magistrate, and different councils of the nobles, in whose hands the chief magistrate was a mere pageant of state, likely to have his most private affairs investigated by the haughty aristocracy. The inhabitants of Venice were slaves to the will of their tyrants. No discussion of political matters was allowed, and anonymous accusations were received and acted upon—the accusations being placed in the mouth of the lion standing in the Place of St. Mark. The following anecdote will convey an idea of the despotic nature of the Venetian government. An English gentleman

* In the armory of the arsenal at Venice, are preserved four instruments of torture employed by the Councils of the Three and of the Ten, for wresting confession from the victims. The first is an iron helmet, which was forced upon the head of the victim intended for torture. He was seated, bound to a chair, and through various little holes, sharp instruments were thrust into his head behind his ear, and in his shoulders. Another instrument is an iron collar, bristled with spikes which were poisoned. The third is a thumb-screw of peculiar construction, capable of giving a refinement of torture; and the fourth is a pair of pincers, which, when heated, were used by the torturer for tearing the flesh.

one day entered into conversation with a Neapolitan at one of the taverns of the city, and the discourse happening to turn upon the Venetian government, the Neapolitan greatly condemned, while the Englishman as warmly commended, some of its institutions. In the middle of the night, the Englishman was aroused by a loud knocking at the door of his hotel, and presently after, the officers of justice entered his apartment, and commanded him to rise. As soon as he was dressed, a handkerchief was bound over his eyes, and he was put on board a gondola. After being rowed for some time, he was landed, and led through long passages until he reached a large hall, where his eyes were unbound, and he was desired to notice what he saw. The Neapolitan was suspended from a beam by the neck. Shocked at the sight, he inquired its meaning, and was informed that he was thus punished for the free animadversions he had made on the Venetian government, and that although the Englishman had refuted his arguments, the republic was displeased with him for entering on such a topic, as it needed no advocates, and commanded him to quit its territories on pain of death. His eyes were again covered, and he was taken back to his hotel, where he lost no time in preparing for his departure, having no wish to remain in a city where political discussion was attended with such dangers.

But the great centre of attraction at Venice is the Place of St. Mark; and the principal objects which here meet the eye, are the Cathedral, Orologio, and the Campanile, the latter seeming to be appendages to the main edifice. In front of the church are three tall, red poles, looking like masts, from which, in former days, the flags of the vassal kingdoms of Candia, Cyprus, and the Morea, waved; they are still decorated on festival-days with gay streamers. Over the porch of the Orologio stands the admirable clock, celebrated next to Strasburgh for its many movements, among which, about twelve and six, which are the hours of Ave Maria, when all the town are on their knees, the three kings come forth, led by a star, and passing by the image of Christ in his mother's arms, do them reverence, and

enter the clock by another door. At the top of this turret, another automaton strikes the quarters. The Campanile is a heavy and heterogeneous pile, neither grand nor beautiful. It was built when the imaginations of the Venetians were full of Constantinople, and the exploits of Dandolo; most of its materials came from Greece, and the architects, as well as architecture, were Byzantine. It was here that Galileo studied at the period when the persecutions of the Romish church would have dimmed the lustre of the heavens from which he was drawing conclusions so sublime and important. The church of St. Mark is, without exaggeration, the most intensely glorious in its internal construction and adornment, that the eye has ever seen or that the imagination has ever conceived. Columns of porphyry, verd antique, and oriental marbles; the pavements composed of minute pieces of white and colored marbles, jasper, agate, lapis lazuli, etc., variously, and for the most part, beautifully disposed: the inlaid ornaments and gilded capitals produce altogether astonishment and admiration. This temple is adapted for nocturnal illumination, and when brilliantly lighted up, its effect must be splendid in the extreme. The Piazza is the only place in Venice where those things which we vulgarly call legs, but for which a Venetian has no use, can be used, every excursion in Venice being by water; but if it should occur to the mind that the leg may be used, the Piazza is the place of promenade, and the associations connected with that small spot of earth are deeply interesting. Here were celebrated the great fair, the carnival, the ceremonials of the church, the triumphs of the state; here the stage was erected for the juggler, the scaffold for the executioner—

"The sea, that emblem of uncertainty,
Changed not so fast for many and many an age
As this small spot. To-day teems full of masks,
And lo, the madness of the carnival!
The monk, the nun, the holy legate masked;
To-morrow comes the scaffold and the wheel,
And he died then by torchlight, bound and gagged,
Whose name and crime they knew not."

[ROBERTS.]

The bridge of the Rialto is interesting; the mind immediately associates it with Shakspeare. It was designed by Antonio

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The Rialto.

da Ponte, the architect of the public prison. Oh, Venice! Venice! as we walk thy streets, how our thoughts roll back to the days of thy glory, when thy winged lion, which even now

"Stands as in mockery of its withered power,"

was an emblem of the sweep of thy magnificence and empire, to which, as to the monarch of the forest, the nations around thee bowed. I walk upon the quay of the Piazzetta, but no lordly procession meets my view, as in the days of the proud pontiff, Alexander the third. It was here the Suabian sued, here the proud ecclesiastic knelt upon his neck—it is here the Austrian eagle hovers, and triumphs over the impotency of thy power. I trace thy history, and I find that, not only now, but even in thy greatness, thou wast a slave—a slave through thy three hundred years of stormy democracy—a slave beneath thy close, hereditary aristocracy—a slave beneath the despotism of the succeeding oligarchy, and more a slave then than now. I enter the "Sala del Gran Consiglio" of thy ducal palace—I see the proud old portraits of each doge. Gazing upon me, they interest not my attention; they claim not my admiration. That black vacancy, intended for disgrace, is a more noble memorial than all; the "Locus Marini Falieri Decapitati," is a noble evidence that one Venetian once lived, who sought to free his country from the bonds of slavery.

Yet, Venice, thy name inspires associations of splendor, and a brilliancy gathers over even thy slavery, as we think of thee—when we think of the aspirations of Galileo; how the gray-haired and venerable old man watched the silent planets from thy Campanile—of Paul Veronese, and Titian, and the Palmas, and Tintoretto, who called forth the images which breathe on their canvasses beneath thy skies—of Petrarch, who sung of Laura amid thy crowded buildings; and thou hast in thy territory his dust; he sleeps at Arqua. Thy glorious churches, thy statues, thy immortal tombs, and thy gondoliers, stealing like shadows over the waters—although

"In Venice, Tasso's strains are heard no more,"

all these are thy glory, and thy glory they must ever remain, more elevated than others; and it was upon these obscure and sequestered spots that Venice eventually raised her glory and renown.

Venice presents to the mind an aspect partially of venerable antiquity, partially of modern European pre-eminence; it is, in point of fact, as Sismondi remarks in his "History of Italian republics," "the link which connects ancient and modern history;" and when we think or read of Venice, a dreamy grandeur and a solemn sublimity gathers over the page and before the eye; when all the elements of government, if government such a state of policy can be called, were riding like miserable wrecks on the billowy commotion of the storm, and ignorantly elevating the conductor which was to call the lightning that eventually struck them. At that moment Venice rose, and her eye glanced along the future and the past. The western Rome was her parent; she saw each dying struggle for the returning triumph, and the last laurels withered in her eye. She saw the eastern empire first wave its sceptre; alternately its friend and its foe, she accelerated or retarded its glory; she triumphed at last over its disgrace, and in its death-pangs divided the spoil with the strong. She saw the French power rise when Clovis conquered Gaul. The Ostrogothic and the Visigothic powers, their glory and their gloom were alike beheld by her. The continent seemed shaken; she alone seemed to stand immovable; at last she fell; the proud republic gave way, "and the state," says Sismondi, "which linked the present with the past, and joined the two eras of the world's civilization, ceased to exist."

We annex an account of the gondola, or boat, employed in traversing the marine streets or canals of Venice.

The length of this beautiful boat is nearly thirty feet, and the breadth about five; and it affords accommodations for six passengers, beside the two rowers. Some, however, are much smaller, and are rowed by one person. The gondola is flat-bottomed, and its sides slope away considerably, particularly toward the after part, which, when the boat is empty, rises high out of the water. The seats, which

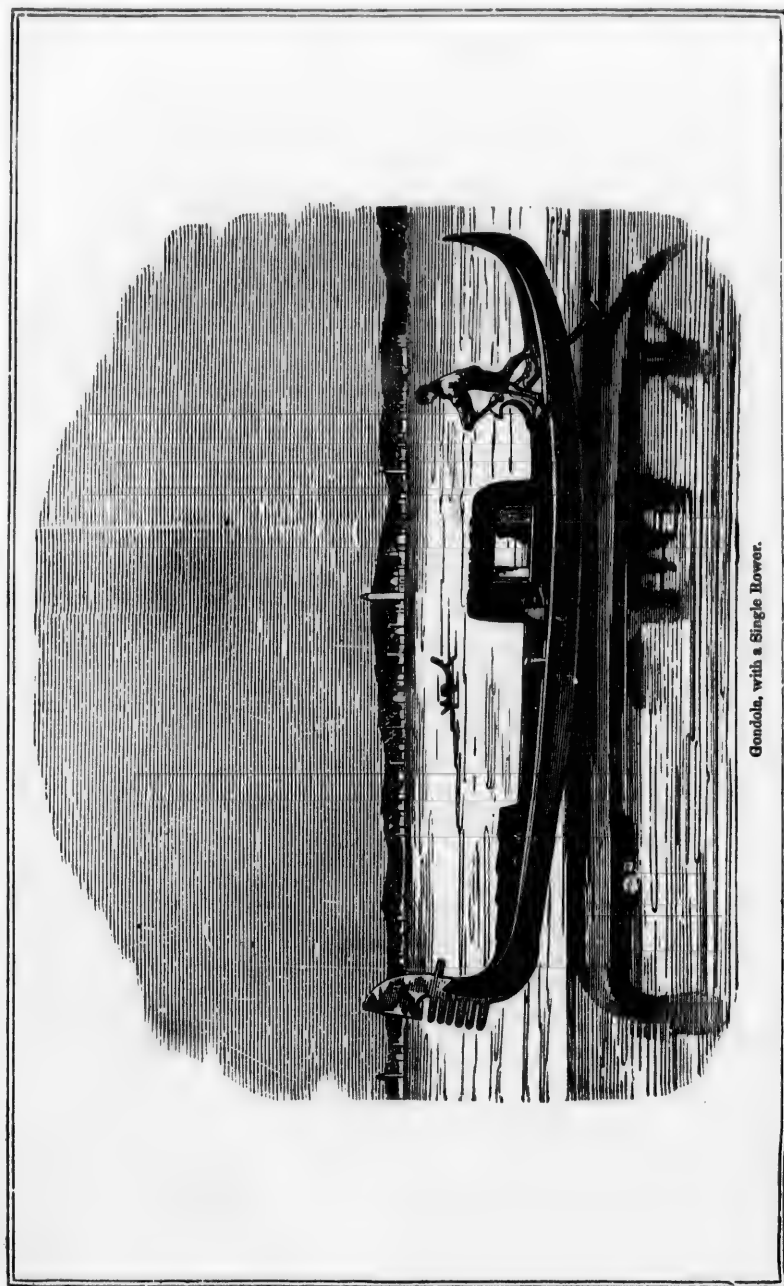
are placed at a distance of something less than two thirds the length of the boat from its head, have a tilt over them, with windows and curtains. This tilt, which is extremely light and elegant, and removable at pleasure, is of frame-work, covered with black cloth, ornamented with tufts of the same color. The head is furnished with a flat iron beak or prow, of the form shown in the engraving, which is similar to what is seen in the representation of the ancient galleys; this is never painted, but kept highly polished: the stern has a wooden beak, not so elevated as that at the head. The seats usually have cushions covered with plush, and the floor is furnished with carpets. The gondolas of private persons, as well as those which are let for hire, are invariably painted black. Formerly the Venetians vied with each other in the splendor of their gondolas, but so much inconvenience was found to result from this rivalry, that a sumptuary law was issued, prescribing the size, form, and color, in which the gondola still appears.

The black color gives them a very sombre, funereal appearance, and their first effect on strangers is at variance with our notions of Venetian gayety and elegance. Our sailors call them "floating coffins," "queer craft," and indeed they have something of a hearse-like character about them. When the black is allowed to become brown and rusty, as is now, owing to Venetian poverty, too often the case, they look particularly shabby and still more dismal. In such a city as Venice, intersected in every part by canals, and where there are few parts where people can walk a hundred yards without coming to a high, steep bridge, built nearly always, not in inclined planes, but in steps rising over an arch, carriages and horses would be of no use. The gondola is the sole equipage of the noble Venetian. In this he is carried on his visits, for his amusement, or to his business, and in this a considerable part of his time is passed. His head gondolier is to him what the head coachman and the groom are to an English gentleman, and something more. When he wishes to go out, he does not order "the horses to be put to," but the gondola to be got ready. As the fares

are low, even the poorest people make frequent use of these boats, and on a saint's day, or other holyday, they are seen gliding in all directions, their occupants sometimes conversing or listening to stories, more frequently playing at tarocco, a game at cards.

In rowing, the gondoliers stand on the extreme edge of the vessel: the master, or principal gondolier, on the right side, with his face toward the head of the boat, and his companion on the left side, behind the company. On the after part, where the back rower is placed, there is a flat piece added over the gunwale of the boat, on which he stands. Thus placed, the gondoliers seem, to strangers, in imminent danger of falling overboard. But this is an event which rarely happens. They balance themselves with apparent ease, and even elegance, pushing their oars forward, and giving them, by the action of the wrist, a turn in the water, resembling what is called with us "feathering." The oars are made of a very light sort of fir; the blade is not bent, as in the English oar, but more in the form of a paddle. They do not use rowlocks, but employ a single fixed thowell, of a crooked form, and about a foot long, against which they hold the oar by pressure only. Previous to turning a corner, from one canal into another, the gondoliers have a peculiar cry, rather musical and agreeable, designed to give warning to gondolas which may be approaching in an opposite direction.

The gondoliers were formerly a very interesting portion of the Venetian population, and enjoyed a degree of consideration beyond that which persons in a similar station of life receive among ourselves. They still are a civil and well-behaved body of men, and act as *ciceroni* to travellers in showing them the curiosities of Venice, and even go with them to the opera-house, and conduct them to their boxes. Formerly they made the city vocal; for in gliding through its canals, and at other times, they sang to one another, in alternate stanzas, passages chiefly from Tasso, translated into the Venetian dialect. The verses they sang were almost invariably taken from Tasso, and rarely from Ariosto or any other poet. The motives for this decided preference have been



Gondola, with a Single Rower.

reasonably assigned by several writers to the circumstance of Tasso's "epic," relating to the wars of the Crusades, where the crescent of Mohamet was made to wax pale before the Christian cross, and to the antipathy, arising from long warfare, both by land and sea, both in Europe and Asia, that has existed between the Venetians and the Turks. Shakspeare's Othello will show, as well as any historical record could do, how violent was this feeling. To this may be added that the Venetians, even down to our own day, have continued an intimate intercourse with Syria, the Holy Land, Turkey, and all the Levant, and are thus the better prepared to enjoy Tasso's brilliant and beautiful pictures of the "orient."

The melody thus sung was calculated for remote effect; and when the gondoliers of distant vessels sung to each other in alternate verses, the sound, as it came "by distance made more sweet," was singularly pleasing. Speaking of this vocal performance, it is said, in a note to the fourth canto of "Childe Harold": "It suits particularly well with an idle, solitary mariner, lying at length in his vessel, at rest on one of these canals, waiting for his company or for a fare, the tiresomeness of which situation is somewhat alleviated by the songs and poetical stories he has in memory. He often raises his voice as loud as he can, which extends itself to a vast distance over the tranquil mirror; and as all is still around, he is, as it were, in a solitude in the midst of a large and populous town. Here is no rattling of carriages, no noise of foot passengers: a silent gondola glides now and then by him, of which the splashing of the oars are scarcely to be heard. At a distance he hears another, perhaps utterly unknown to him. Melody and verse immediately attach the two strangers; he becomes the responsive echo to the former, and exerts himself to be heard as he had heard the other. By a tacit convention they alternate verse for verse: though the song should last the whole night through, they entertain themselves without fatigue, and the hearers, who are passing between the two, take part in the amusement." But this interesting practice has declined with the prosperity and independence of Venice.

THE OCELOT.



HIS beautiful animal is a native of Chili and Mexico. The ocelot was known to the natives of South America by the name of *tlalocelotl*, from which, by abbrevia-

tion, we have derived a cognomen less difficult to pronounce, and which, at the same time does not much differ from the original designation. In size the ocelot is about three feet in length and eighteen inches in height. The legs are long; ears somewhat broad, and sometimes tipped with a few hairs. Upon a gray ground are oblong, fawn-colored patches of a dark color, surrounded with a border perfectly black. At the top of the back there is a continuous, dark line, and the tail is beautifully spotted. The under part of the body is white, with spots of fawn which extend to the feet. The skin of the male ocelot exceeds that of the tiger in beauty and variety, and in brightness and regularity of the spots it is much superior to the leopard. In this respect, the panther or the ounce can not be compared to the ocelot, so that in appearance it is more elegant than those of its tribe which inhabit the old world. In the female the colors of the skin are comparatively dull, and the spots less regular.

The ocelot, like most animals of the cat tribe, is distinguished in its wild state by considerable ferocity, though specimens which have been brought to Europe have exhibited a subdued character. A male and female were brought to Paris in 1764 by M. Lescot, who had taken them when quite young. It rarely attacks man, and fears dogs, and when pursued, seeks safety in flight, endeavoring to elude its assailants by mounting a tree.

The ocelot passes the day in its retreat, but night it prowls about in quest of prey, and under cover of the darkness, it approaches human habitations and enters the farmyard. It sometimes awaits the approach of its prey concealed amid the branches of a tree, and when they are sufficiently near, it springs upon them with unerring aim. It sucks the blood of



The Owl.



The Ocelot.

the animals which it destroys, and therefore commits greater ravages than if its appetite were appeased by feeding upon the flesh of the animals it killed.

In a state of captivity it does not lose much of its natural character. M. Lescot states that he was obliged to confine in a cage the two specimens which he brought over, and which had displayed their savage character at so early a period. He supplied them on the voyage with fresh meat, of which they ate seven or eight pounds a day. The ocelot, like the jaguar, panther, leopard, tiger, and lion, only produces two of its kind at a birth.

RULES FOR JUDGING OF THE WEATHER.



T is agreeable and useful to have a barometer in the house. It is a pleasing companion and friend. Those who notice it daily will soon find that they are not to expect rain when the pointer is at rain, nor fair weather when such is the monitory indication. That which is to be observed is the course of the barometer. If yesterday it was at "set fair," and to-day it is down at "fair," rain may be expected at any moment; and on the contrary, if it has been at "much rain," and has gradually risen to "rain," fair weather may be calculated upon. The barometer, with observation, is a weather guide; without it, unless in extreme cases, it can not give the information wanted. Perhaps the most infallible indication of the instrument is that of a sudden and extensive fall, when a storm is sure to arise. Attention to this fact has probably more than once saved us from shipwreck or other disasters at sea. We give below the late Dr. Dalton's rules for judging of the weather by the barometer:—

"When the barometer is near the high extreme for the season of the year, there is very little probability of immediate rain.

When the barometer is low for the season, there is seldom a great weight of rain,

though a fair day in such a case is rare. The general tenor of the weather at such times is short, heavy and sudden showers, with squalls of wind from the southwest or northwest.

In summer, after a long continuance of fair weather, with the barometer high, it generally falls gradually, and for one, two, or more days, before there is much appearance of rain. If the fall be sudden and great for the season, it will, probably, be followed by thunder.

When the appearances of the sky are very promising for fair, and the barometer at the same time low, it may be depended upon, the appearances will not continue so long. The face of the sky changes very suddenly on such occasions.

Very dark and dense clouds pass over without rain, when the barometer is high; whereas, when the barometer is low, it sometimes rains, almost without any appearance of clouds.

All appearance being the same, the higher the barometer is, the greater probability of fair weather.

Thunder is almost always preceded by hot weather, and followed by cold and showery weather.

A sudden and extreme change of the temperature of the atmosphere, either from heat to cold or cold to heat, is generally followed by rain within twenty-four hours.

In winter, during a frost, if it begins to snow, the temperature of the air generally rises to 32°, and continues there while the snow falls, after which, if the weather clear up, expect severe cold.

LGIER.



LGIER is situated in 36° 49' north latitude, 3° 25' east longitude, on the southern shore of the Mediterranean sea, the waves of which wash its walls. It is built

in the form of an irregular triangle, the

base of which is formed by the seacoast. The streets of the town are remarkably narrow, filthy, and uneven; very few of them cross others at right angles, and very few are straight.

The town of Algiers contained thirteen large mosques, with minarets, and about seventy small ones, or chapels, as we should call them, belonging to private individuals. There were also a synagogue for the Jews, and a chapel and hospital for the Christians, the last of which was supported at the expense of the Spanish government. The palace of the deys was in the lower part of the town; but the late dey had his residence within the citadel, at the highest point of the city. The town derives from the country a tolerable supply of water, which is brought to it by an aqueduct, and then distributed by conduits to the different parts of the city. Algiers contains the usual proportion of baths and coffeehouses, but there are none that appear to claim particular notice.

Previously to the French invasion the state of Algiers was nominally subject to the Turkish sultan, but was, in point of fact, perfectly independent. The Turkish dominion at Algiers, originated with the famous Turkish corsair, whom we call Barbarossa, but whose real name was Horush, or Baba (father) Horush, as his men were accustomed to call him. This person was called in by the Algerine Moors in 1516 to assist them against the Spaniards, and availed himself of the opportunity to make himself master of the place; but he ruled so tyrannically, as to provoke the Moors to revolt, and he was killed in 1518, fighting at the head of his Turks. He, however, left a brother to succeed him, who in order to secure his authority, placed himself under the protection of the then mighty Turkish empire the ruler of which, Selim I., appointed him pacha and Regent of Algiers, and sent him a body of Janissaries. From that time the sultan used to appoint the pacha of Algiers, who was at the same time commander of the forces, and to send men and money for the service of the garrison. But in the seventeenth century the Turkish militia obtained the right of choosing their own commander, and of paying themselves out of the revenue of the

regency: the sultan, however, continued to send a pacha, as civil governor, until the beginning of the last century, when Baba Ali Dey, a chief of the militia, seized the then pacha, put him on board a ship, and sent him back to Constantinople. The rebel did not omit to send by the same vessel envoys with rich presents to the vizier and other principal officers of the porte, intimating to them that the rejected pacha had treacherous designs, and that it would be well that the chief of the militia should in future perform the duties of the civil governor also, subject, of course, to the approbation of the sultan. The porte was obliged to wink at this transaction; and from that time, the Janissaries, with their chosen chief, have been absolute masters at Algiers. The dignity of dey was one which the lowest soldier might hope one day to fill; but it was held by a most precarious tenure, as the lives of comparatively few of these military governors have been allowed to reach their natural termination.

MUSIC.



HE musical faculty is not peculiar to man. It abounds in the cries and carollings of many of the inferior tribes. There is music of the most melting and plaintive sort in the

notes wherewith the bird whose "little household hath been stolen, fills and saddens all the grove with melodies of deepest pathos." There is a higher and harsher harmony in the scream of the cloud-cleaving eagle, who goes up, singing his own wild song, through the blue ether, and over the arch of the rainbow. There is cheerful and elevating music in the note of the lark, rising aloft in the dewy dawn, and screwing the fresh morning air, which the poet thus apostrophizes:—

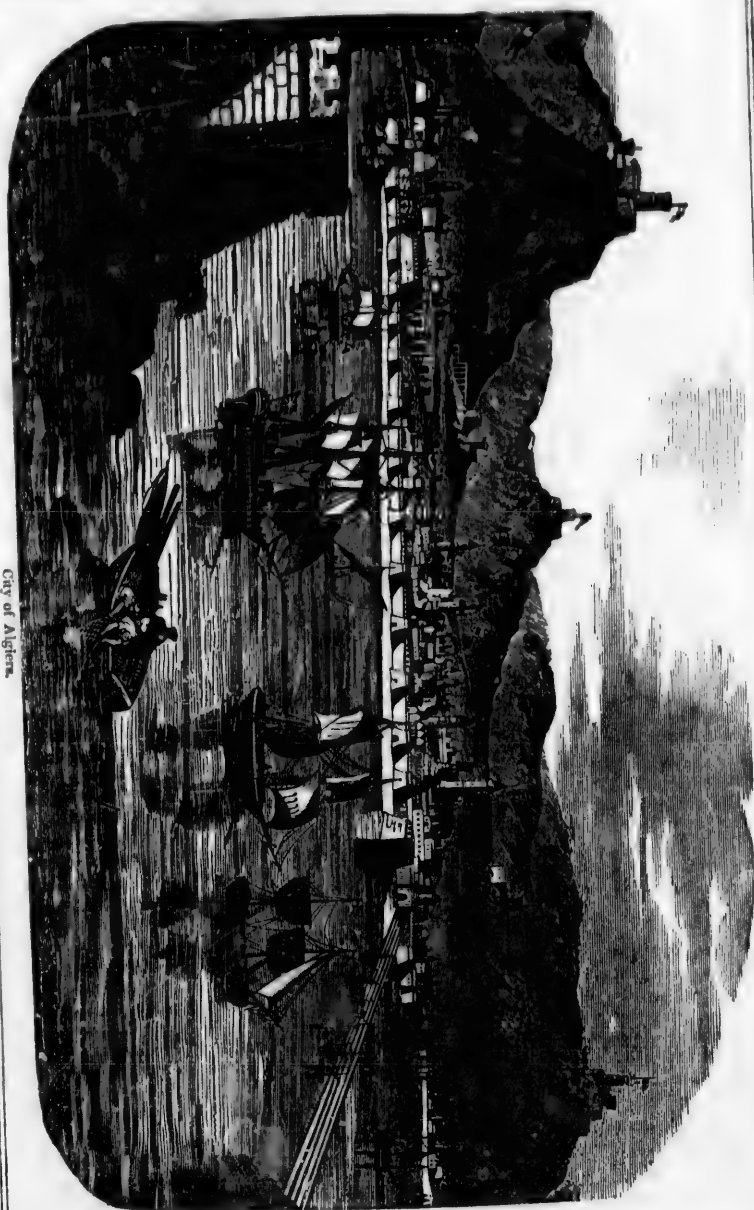
"Hail to thee, blithe spirit!—
Bird thou never wert—
That from heaven, or near it,
Pourest thy full heart
In profuse strains of unpremeditated art!"

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City of Algiers.



"Higher still, and higher,
Through the air thou springest ;
Like a cloud of fire,
The blue deep thou wingest ;
And singing still dost soar, and soaring ever singest."

There is music, who needs to be told, in the note of the nightingale, called by Milton "most musical, most melancholy bird," which trills her soft and tender lays as if to soothe the evening for her grief at the departure of the sun. There is music of the boldest and most masculine kind in the roar of the lion, coming up, vast and hollow, upon the wind of the wilderness, and affrighting the far-off caravan on its solitary way. What a harmony there is in the varied voices of inanimate creation—what a fine pause in the hush of the evening—what a sweet tenor in the lapse of a stream, which, to the "sleeping woods, all night, singeth a quiet tune"—what a shrill treble in the higher notes of the gale singing through the shrouds—and what a tremendous base in the voice of the thunder, speaking from his black orchestra to the echoing heavens! Mrs. Hemans asked Sir Walter Scott if he had not observed that every tree gives out its peculiar sound to the wind? He said he had, and suggested that something might be done, by the union of music and poetry, to imitate those voices of trees, giving a different measure and style to the oak, the pine, the willow. Diversities in this respect may be noticed among the trees of the wood and the garden. From the willow comes a kind of dry, hissing sound—from the oak, a strong, sturdy rustle, as if the old king of the forest, over whom centuries had passed, yielded his head reluctantly to the force of a blast, born and dying that very moment—from the sycamore, with its large leaves, a calm, full murmur, as if the tree were one vast hive of bees (and indeed, so often it is)—from the yew-tree, a funereal wail, as if each leaf were a sigh—and from the pine, a deep, lingering, and most musical sound, well called by a poet, an "old and solemn harmony." So much for the music of nature. We will only allude to the beautiful fancy of the ancients, that from the motions of the heavenly orbs there issued the soft floating of an ethereal and immortal melody which the gross ear of man hears not, but which is audible to

higher and holier spirits; and that thus, literally, do the morning stars sing together. We now know this to be but a fancy, though a fancy of the finest and most poetical kind. We now say rather with Addison, in his beautiful hymn:—

'What though in solemn silence all
Move round the dark terrestrial ball?
What though no real voice, nor sound,
Amid their radiant orbs be found?
In Reason's ear they all rejoice,
And utter forth a glorious voice;
For ever singing, as they shine,
'The Hand that made us is divine.'

Artificial music is divided into two kinds—instrumental and vocal. We are all acquainted with the common kind of instruments from which, by cunning fingers, the soul of music is extracted—the sweet-toned flute, which sounds so finely across a lake or river, in the still evenings of summer—the spirit-stirring, and ear-piercing fife—the deep, reverberating drum—the trumpet, with its long and swelling blast—the piano, with its soft, mellow, and trembling vibrations—the violin, with its cheerful and awakening notes—the lute, with its tender and amorous descant—the harp, consecrated as that instrument which once vibrated to the hands of David, as he sang on the plains of Bethlehem, or poured out his eloquent plaint from the roof of his palace, in the city of the Great King—the guitar, with its light and airy music, transporting our thoughts to the groves of Italy, or to the cork-tree forests of Spain, to the evening lattices of Madrid, or the moonlit waters of Venice—and last, not least, the majestic organ, with its awful volume of sound. But far above these, or all other instruments of music, is that glorious instrument first invented and tuned by Deity himself. We mean the human voice, with its melting cadences, its guttural sounds, its high, clear melody, which, whether it swells or sinks, awakens to rapture or lulls to repose—whether it be grave or gay—whether it issue from the deep pipe of man, or from the softer breast of woman—has something in it sweeter, more noble, natural, and various, than all the music of the grove, than all the melodies of birds and bees, and murmuring of summer waters; or than all the sounds which art has extracted from cold and lifeless instruments.

The origin of music, as of all the arts, is obscure in the mist of ages. In its simplest form, indeed, it must have been as early as the human voice, the tones and cadences of which, as expressive of joy or sorrow, love or fear, are all musical. This natural expression of emotions by sounds, would lead to a repetition of these sounds, and hence, by-and-by, would arise that artificial division of lines which we call rhythm, a love of which is one of the most general principles of the human soul; for it will be found to pervade all tribes, all ages, all classes. It alleviates labor and cheers the heart. Man becomes a rhythmist long before he knows it. Witness the regular strokes of the oar, the smith's hammer, the thrasher's flail, and the dances of the rudest nations. Music, indeed, and dancing, are at first always connected, till, by-and-by, the song is separated from the dance, and instruments, which originally served only to accompany the song, become also the object of a separate art. Some suppose that music began with a desire to imitate the songs of birds, the voices of animals, or the other ordinary sounds of nature. According to this theory, primeval man, walking in the woody wildernesses of the world's young day, and hearing every grove, every bush, every stream, and every meadow, vocal with the low of cows, the bleat of sheep, the hum of bees, the buzz of insects, the song of birds, the voice of breezes, the murmuring of streams, the pattering of rain-drops, the fine waves of melody chasing each other over the summit of the everlasting woods, became ashamed of remaining silent amid such a congregation of song, and began to imitate, as he best could, the melodies by which he was surrounded. Be this as it may, music was at length invented. Surely in an auspicious hour—surely on one of the white days of earth's dark pilgrimage—on one of those days which seem to have lost their way to us from a loftier region—when the air is balmy, the sky cloudless, the sunshine asleep as with excess of gladness, a light breeze warbling over the landscape, and whispering some happy and unutterable tidings in every cowslip's ear—nay, surely, rather in that golden age of the world, of which

the tradition only remains, when the heavens were nearer, the skies clearer, the clouds more gorgeous, the fat of the earth richer, the foam of the sea brighter, than in our degenerate days—when in our groves were still seen the shadows of angels, and on our mountains the footsteps of God—surely then, and not later, was music born. So far as respects the known history of the art, we must consider the rise of vocal and instrumental music as coeval. Perhaps the first instrument invented was the pipe of the shepherd, who had heard the wind whistle among the reeds. It is probable that while warriors early began to utter their war-cry and sing their war-song, that shepherds first cultivated music as an art. According to scripture, Jubal, the son of Lamech, played on musical instruments even before the deluge. He was the "father of those who handle the harp and organ," which proves, not that those instruments bore much resemblance to what we now denominate by the terms harp and organ, but that musical instruments of some sort were then found out, and the art of music cultivated. We find afterward that, among the Hebrews, the character of poet and singer was united in the same individual. One of the oldest songs with instrumental accompaniments is that which Miriam, the sister of Moses, sung after the passage of the Red sea. At the time of David and Solomon, music had reached its highest perfection among the Hebrews, and part of their religious service consisted in chanting solemn psalms, with instrumental accompaniments. In the structure of scripture poetry itself, in a certain parallelism or repetition of the main idea in the different members of a sentence, there was a distinct rhythm and a varied music. In the tomb of Osymandyas, near Thebes, musical instruments have been found; and it has hence been concluded that the Egyptians were acquainted with music two thousand years before Christ. From them, possibly, the Hebrews derived their music. Many beautiful fables are told by the Greeks concerning the origin and history of music in their lovely land. By it, they said, Orpheus tamed the wildest beasts of the desert; and as his lyre sounded, the lurid crest of the serpent

fell, the mane of the lion ceased to bristle; the eye of the tiger ceased to glare; which was probably an allegorical form of expressing the power of the art in softening the most ferocious of human natures. By it, they said, Amphion made the very stones of his projected city arise and form themselves into shapely and stately buildings; and by it, they said, Arion, cast into the sea, compelled a dolphin to bear him on his back in safety to the shore. These, of course, were fables; but they were fables which proved that the power and charms of music were, even at that early age, fully appreciated.

From the sixth century before Christ, music seems to have been studied scientifically. The celebrated Pythagoras invented an instrument for the mathematical determination of sounds, and added an eighth chord to the harp. The Romans were principally fond of martial music; as might have been expected from their warlike tastes. Under the emperors, music became cultivated as an object of luxury. We have all heard of Nero fiddling while Rome was burning; and when he perished "by the justest doom, which him, the world's destroyer, e'er destroyed," five hundred musicians were dismissed. Perhaps, though this would lessen the romance of the story, it was one of these "whose hand, unseen, strewed flowers upon his tomb." The early Christians employed religious songs in their assemblies; and we hear of our blessed Lord himself singing a hymn ere going out to the Mount of Olives. Holy songs, especially, were sung at the Lord's supper, and at their love feasts. In the fourth century, regular psalms were introduced, which were sung from notes, by persons appointed for that purpose. The mode of singing in the primitive churches was sometimes in solo, sometimes alternately, and sometimes by a chorus of the whole assembly. In the fourth century, precentors were appointed to lead the praises of the church. Schools appropriated to singing were instituted somewhat later, and only in a few places. Choirs were gradually introduced in Italy, and contributed greatly to the splendor at least, of religious worship. Italy, indeed, has always been the land of music. Luther, the first

reformer, was an enthusiastic musician; and we owe to him that fine, solemn strain called "Old Hundred." Our readers are familiar with the names of the great musical composers of later times. Haydn, Handel, Beethoven, and Mozart, were among the principal of these. Handel's great piece, the "Messiah," produced, when sung in London, at the close of the last century, a prodigious effect; and it was fine to see old George the Third standing up at its celebration, amid a crowded assembly of his subjects, and bursting into tears. Robert Hall witnessed this with much emotion, and said it seemed a national testimony to the truth of Christianity. Of Mozart, the great German composer, singular stories are told. His sensibility to the finest differences of tones was so exquisite as often to cause him much pain. The sound of the trumpet, on one occasion, so affected him that he fell to the ground, pale, lifeless, and convulsed. He was the most absent, careless, and childish of men, till seated at his piano, when he seemed to become inspired.

We may now specify some of the pleasures and powers of music. We have been now shaken with laughter at some ludicrous ditty, which made us, for the time, forget our poverty, and remember our misery no more; and again we have been elevated, soothed, softened into devotion, as some psalm-tune of more than ordinary sweetness was being sung amid the deepening shadows of a sabbath evening. We have been now transported by the voice of one beloved singing to us alone; and now by the many mingling notes and harmonies of a great concert of performers. And we felt these pleasures to be intellectual in their nature. They touched all that was high, and all that was pure, and all that was spiritual, and all that was immortal, in our natures. Such pleasures we felt were simple and cheap; they were at once exquisite and economical. Such pleasures, too, were pure and holy; they stung us not as we passed; and we could look their memory in the face on the next day. Yes, music has in it wondrous, mysterious, we had almost said divine powers. It can not indeed, as was fabled of old, subdue the minds of beasts by the

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power of its melody, nor make stones to move and leap at its bidding ; but it can work wonders far superior in moral grandeur. Music can soothe sorrows which nothing else can assuage ; it can open fountains of tears which had been fast locked up in the frost of misery, and thereby relieve the burdened heart. How often has a tune dispelled the spirit of anger ! How does music bless and cheer the blind, whose ears, in fulfilment of the fine compensations of the universe, are the more exquisitely open and alive in proportion as their eyes are shut to all the beauties of the external world ! We know that when Milton lost his eyes in the service of his country, he was wont to refresh himself by music ; and the great structure of the "Paradise Lost" rose, like the ancient temple, to the sound of the organ. See how those sightless eyeballs of his, which had rolled in vain to find the day, seem to dilate and kindle, as the solemn instrument pours out its soothing and inspiring strains ; and the old man, though "fallen on evil days and evil tongues, with darkness and with dangers encompassed round," is happier in his little room than Clarendon on the woolsack, or Charles on the throne ! How does music awaken the spell of patriotic emotion ! See how tears stream down the rugged cheeks of Caledonia's emigrants leaving their native land, while the bagpipe is playing, "We return, we return no more." All have heard of the effects produced on the Swiss soldiery when they hear, in a strange country, the "Ranz des Vaches," or cow-song, which they had been wont to hear from the milkmaids of their own romantic land. They weep, they tremble, nay, have been known to throw down their arms, and refuse to fight, under a sudden fit of home-sickness. But if music has sometimes paralyzed, it has more frequently nerved the soldier. Battles are won and lost to the sound of music ; and the hardy veteran feels uplifted by the breath of music above the fear of death itself. We mention this, not in sympathy with the foul art of war, but from sympathy with the fine art of music ; for music has nobler scenes of triumph than the field of blood. It has soothed the soul of the dying saint, whose spirit has burst its prison-tenement in song—song to be

renewed straightway in sweeter and holier strains, under the altar, or before the throne. It has made the martyr forgetful of his fiery pangs ; and, singing at the stake, or on the scaffold, his soul has soared away, "the nearest road to the celestial gate." It is now generally supposed that our blessed Lord chanted aloud the whole of the twenty-second psalm upon the cross, and thereby at once proved that he was the victim whose agonies had been there so minutely prefigured and described, and soothed his spirit under its burden of unutterable anguish. Or if we would see music in still another noble field of its triumphs, follow it to the receptacle for the insane ; see there the poor maniac lady leaning over her piano ; and as her fingers pass across the ivory keys, which she has touched in former and happier days, old and soothing recollections stream in upon her mind—her eyes roll less wildly, gentle tears appear within them, nay, smiles begin to draw upon cheeks where they had long been absent, and where, but for the power of music, they would have reappeared no more. Music, indeed, from the powers it exerts, and the pleasures it gives, of all arts suggests, perhaps, most the idea of the Infinite—of some higher and holier state of being—and awakens strange sensations, which we may recognise in some more exalted state of our existence.

Then there are the intellectual, moral, and spiritual advantages of music. Music not only supplies pleasures of a high order ; but, as a science—a science which, if taught properly, must be taught in a scientific method—it tends to open the mind, to cultivate the intellect, to expand the views. By connecting sound with beautiful words, it tends to improve the literary taste, to create a love for poetry, and, in general, a passion for all the fine arts. Its pursuits generate a fine enthusiasm. A man who throws his soul into the pursuit, loses himself in a delightful dream ; his mind rises above the groveling cares of earth, into a rarer, purer, more intellectual atmosphere, from which, if he must and does descend, he descends a wiser and a better man. The moral advantages of the science of music are undeniable. Whatever tends to enlighten

the mind, to soften the heart, to supply a constant source of innocent and intellectual enjoyment, to withdraw the soul from the gross gratifications of the senses, must tend to improve the morals. It will generally be found, that those who possess a taste for music are milder, and, on the whole, better men than those who have none; and those artisans will not be found the worst of the class, who spend their evenings in the midst of their own families, practising, now and then, on some musical instrument, or tuning their own voices to secular or to sacred song.

We have already traced the connexion which has subsisted from very early times between religion and music. Scarce had music sung her first song, or uttered her first lisping accents, than that song arose, as by a fine instinct, to heaven, and those accents began to speak in wonder and praise of the great Creator of all; and music has since, of all secondary causes of the continuance of religion in the midst of a hostile world, been one of the principal. It has promoted private, family, and congregational piety. A private Christian versed in music can fan the flame of his devotion by singing, even in the solitary chamber; or, as the pilgrims of old were wont to lighten their long and lonely way, by spiritual songs. Thus Henry Martyn, as he crossed the great deep, on his way to receive the missionary's crown—and seldom has there been a nobler aspirant to the honor—when a dark shadow, from the very greatness of the enterprise, fell sometimes upon his spirit, was wont to solace himself, to strengthen his faith, to renew his flagging hope, by singing all alone in his berth, or on the evening deck, as the sun was setting in the direction of his beloved native land, which he was leaving for ever, such hymns as that beginning with the words, "O'er the gloomy hills of darkness;" and his fine spirit became itself again. How advantageous music is to family devotion, we need not prove; nor need we dwell on the sweet solemnity of family worship, except to notice how large a share of the beauty of the service arises from its musical part. Without the "voice of psalms, the simple song of praise," it must be confessed that this religious duty is com-

paratively cold and uninviting. Let the fathers and mothers of families attend, therefore, more to the cultivation of music, as they would have sweeter services, and happier circles around their hearths, and offer up a more acceptable morning and evening sacrifice to the God of the families of all the earth! How conducive, too, is music to congregational piety! What a delightful thing is a well-sung church! How it "beats the heavenward flame"—to use the words of "The Cottar's Saturday Night!" How fine to hear a noble psalm or paraphrase set to a suitable tune, and under the voice of a commanding leader, a thousand voices sending up, like a "steam of rich, distilled perfumes," their worship to the Most High!

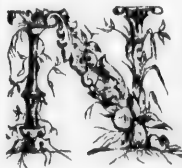
The art which we thus panegyricize is not, we have seen, of yesterday, neither shall to-morrow see its end; for it is an eternal art: it is destined to survive the sun and the stars. To music shall the present system dissolve, for "the trumpet shall sound."

"The trumpet, men, intoxicate with pride,
Arm at its blast for earthly wars:
To arch-angelic lips applied,
The grave shall open, quench the stars."

Yes; the grave shall to music open its jaws; the books of judgment shall to music expand their oracular pages; the new heavens and the new earth shall descend amid shoutings—"Grace, grace unto them!" again shall the morning stars sing together; the "ransomed of the Lord shall return and come to Sion with songs;" and throughout eternity shall the blessed inhabitants, standing on the sea of glass, or sitting before the throne, amid the valleys of the heavenly Canaan, or on the summits of the everlasting hills, sing the song of Moses and of the Lamb!

IMPRUDENCE.—Those who, in consequence of superior capacities and attainments, disregard the common maxims of life, ought to be reminded that nothing will supply the want of prudence, and that negligence and irregularity, long continued, will make knowledge useless, wit ridiculous, and genius contemptible.

COLONIZATION OF GREENLAND.



NEAR the end of the tenth century, an Icelandic or Norwegian rover, named Gunnbeörn, discovered the western coast of Greenland, having been driven toward it by a storm. Whether the scanty vegetation really appeared to him delightful, after the hardships he had incurred, or he wished to tempt his countrymen to visit it, is uncertain; but the inappropriate name of Greenland came into use, and still continues the designation of a country described as "one immense glacier." Eirik the Red, having, as it is stated, committed a murder in Iceland, sailed for Greenland; and having spent some time on its inhospitable shores, returned with flattering accounts of its green and fertile valleys, and, by offering to conduct a colony to settle among them, procured his pardon. A number of vessels set sail, under his command and direction; but encountering a storm, several were cast away, or driven back to Iceland, and only about one half reached their place of destination. Those, however, who did arrive, set to work in earnest, and the foundation of a colony was laid, which flourished for three or four hundred years. "As the distance," says Dr. Henderson, speaking on the supposition that the Icelandic colony had been planted on the eastern shores of Greenland, "between the two countries was little more than two hundred miles, a regular intercourse was established between them; and the number of settlers increased so rapidly, that soon after the introduction of the Christian religion, about the year 1000, a number of churches were built along the east coast, and a bishop was appointed to superintend the ecclesiastical affairs of the colony. He was a suffragan to the archbishop of Dronheim, in Norway. For the space of more than three hundred and fifty years, a regular intercourse was carried on between the colony and Denmark or Norway. In the year 1406, the last bishop was

sent over to Greenland. Since then, the colony has not been heard of. Its loss has been attributed to the wars which took place at that time between the Danes and Swedes, which prevented the trading vessels from putting to sea, and to the accumulation of vast shoals of ice around the coast, by which they have been rendered totally inaccessible."

At the last accounts of this colony, it was stated to be composed of nearly 200 villages. The question then arose—did the colony still exist, though shut out from all intercourse with the rest of the world? "A current, which issues from under the great masses of ice enclosing the pole, runs southward along the eastern coast of Greenland, carrying down an immense body of heavy drift ice. This ice sometimes occupies the whole extent of ocean between Greenland and Iceland, and often forms a belt round Cape Farewell, reaching from 120 to 160 miles out to sea." Had, then, this impenetrable barrier been formed since the Icelandic colony was planted in Greenland? Were villages and churches, Christianity, and a civilized people, still to be found, though shut up in a world of their own, by "eternal" ice? Some ventured to affirm that the colony had been planted on the western side of Greenland, and that its disappearance must have been caused by a piratical expedition, or by a contagious disease, or perhaps by both combined. But others as warmly contended for the eastern site; and there was romance enough in the idea to excite controversy. Dr. Henderson, resting his judgment on the opinion of Egede, a Norwegian clergyman, inclined to the opinion which supposed the eastern coast to be the site of the colony. He expressed an anxious and natural wish for its rediscovery, and for "an account of the state of religion and science among them, after they have been shut for so long a period from all intercourse with the rest of the world. That the descendants of the ancient colonists may still exist, although cut off from any supplies from Denmark, is rendered probable by the circumstance, that in Egede's time the barrier of ice, as far as he explored it, did not connect with the shore, but left a space of open water, in which

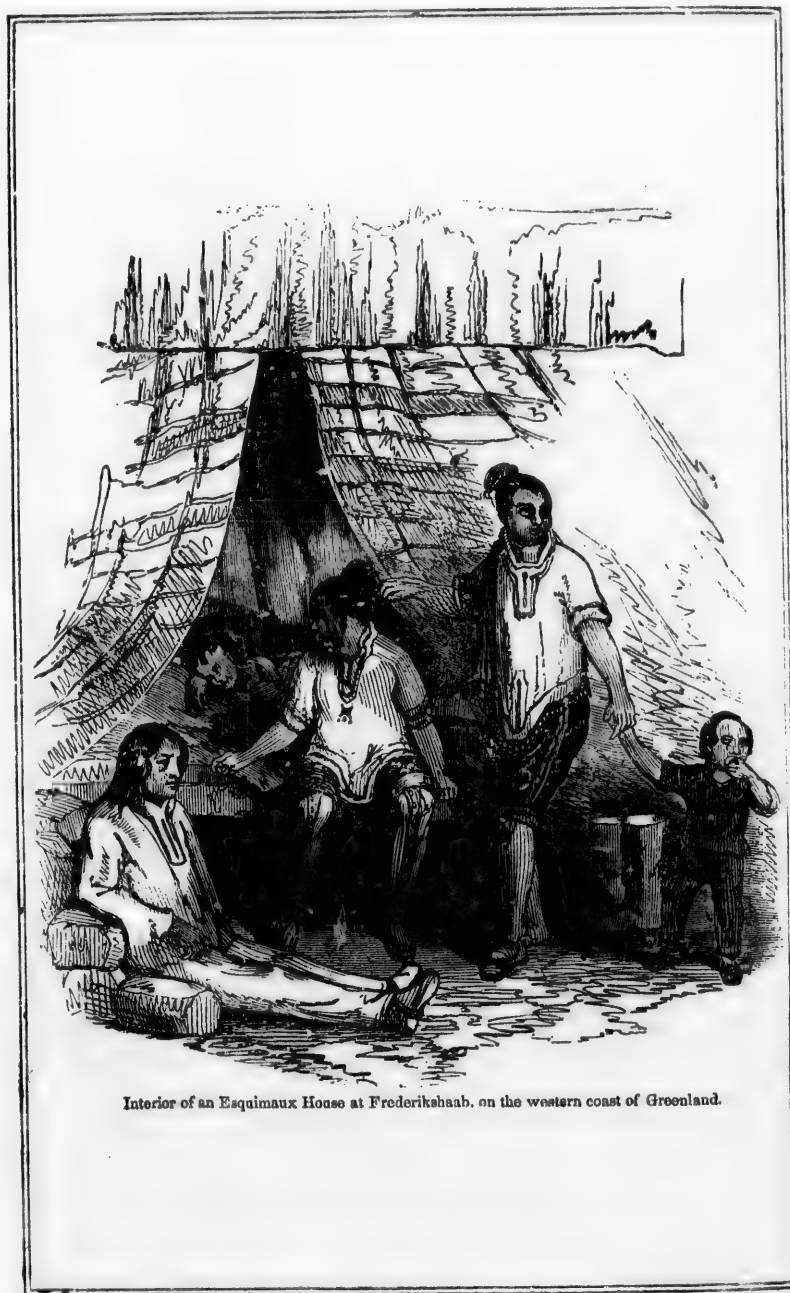
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Interior of an Esquimaux House at Frederikshaab, on the western coast of Greenland.

the inhabitants might catch a sufficient quantity of fish for their support."

The question seems now to have been set at rest by the exertions of an enterprising Danish officer, Captain Graah. He contrived, in 1829, to make his way from the western to the eastern coast of Greenland. There were no ruins to be found, which might indicate that a civilized people once dwelt there; and, in his opinion, the low tract of country along the coast was far too limited for the existence of such a colony, containing so many villages. It seems unreasonable, too, to suppose that the access to the eastern coast should have been so widely different, a few hundred years ago, from what it is now. We must therefore come to the conclusion, that the ancient Icelandic colony was planted on the western side, along the shores of Davis's strait, where ancient ruins, especially of churches, occur, apparently putting the conclusion beyond a doubt. The cause of the extinction of the colony must be left to conjecture, though various causes might very readily occur to any one who considers the situation of the colonists at a time when intercourse was far from being regularly established.

The modern colonization of the western coast of Greenland is owing to the exertions of the Norwegian clergyman, who thought that the site of the ancient colony was on the eastern coast. Hans Egede, who had long meditated the attempt, at last being aided by subscriptions, and receiving the sanction of the authorities, planted a missionary settlement in the year 1721 on the western coast, near 64° north latitude. This he named Godthaab—Good Hope. He struggled with many difficulties for about ten years, when he was joined by the Moravians in 1733. After the missionaries had established themselves, the Danes began to frequent the coast, and gradually a number of settlements were formed, which rank now as colonies of Denmark. The Danes procure, as articles of commerce, seal-skins, fur, eider-down, train oil, whalebone, and fish.

The natives of Greenland are the Esquimaux, a widely-spread national family, with whose characteristics we have be-

come familiar, from the many expeditions that have been made in recent years to the northern parts of America. They are found in Labrador, and spread over the American coasts of the Arctic ocean, in Greenland, and on the islands between America and the pole, as far as they are inhabitable. The inhabitants are, generally speaking, of a ripe olive color (some also black), of a mean stature, with black hair, flat noses, and thick lips. They are nimble and strong, rather desperate than courageous, thievish, treacherous, and revengeful; for they would steal before the mariners' faces, and kill them after they had been well entertained by them, but are very affectionate to one another and their country. In the winter they come from the seashore to the valleys, where they have their little villages, consisting of caves, round like an oven, made close to one another at the foot of a mountain; their doors are to the south, and they draw off the water that falls from the hills by trenches. Before the doors they have a kind of porch, neatly made of the ribs of whales, and covered with sealskins. One part of the floor is higher than the rest; this they strew with moss to sleep upon. In the summer or fishing time, they live in tents covered with skins.

Our engraving represents the interior of an Esquimaux "cave" at Frederickshaab, one of the Danish settlements on the western coast of Greenland. It represents, therefore, the interior economy of one of those Esquimaux families who have come under the civilizing influences and instruction of the missionaries.

UTILITY OF BIRDS.



SOME people contend that these creatures are incarnations of mischief, while others assert that they are the winged instruments of prosperity. S. declares that he would not have a gooseberry if he left

a tit alive. T. as stoutly asserts that nei-

ther gooseberries nor anything else will be left if the tits are destroyed. We have thought it advisable to give this discussion full scope, because it may be truly regarded as one of the more important of the questions incidentally connected with gardening, and moreover, one concerning which there is the most marvellous ignorance. Thousands imagine that birds live on nothing but corn and fruit, and are therefore supported at the personal expense of those who grow corn and fruit, without making any sort of return. "What," say they, "is the use of such things? We can't eat them; and there is no good in feeding a swarm of useless plunderers." And therefore, because of this wise conclusion, the order is given to shoot, trap, and poison, without mercy. Let us hope, however, that the arguments in favor of birds will remove this error, and that the question between man and birds will have reduced itself to whether the balance of good is in favor of the latter or against them.

It would be idle to assert that birds consume nothing which, but for them, we might consume ourselves. They feed in part at our expense. They destroy the insects that infest our gardens, when they can find any; and when the insects are gone, they search for other food. The first is their labor, the second their wages. And is not the workman worthy of his hire? The man who grudges a bird a little seed or fruit, might as well begrudge his weekly pay to the laborer. There is no doubt that a garden would be less expensive if all the work in it were done for nothing. If a master would pocket his servant's wages, he would have more to spend upon himself. But this sort of arrangement is not exactly consistent with the design of Providence; and we are sure that it would not meet with the approbation of either S. or T. We repeat it, then, let us look at birds as skillful workmen, and the fruit or seed which they eat as the coin in which they are paid their wages. Not that birds are an unmixed good. Is man himself? Is anything? There are situations, doubtless, where birds are an absolute nuisance. Imagine, for instance, a garden surrounded by a wood which swarms with blackbirds.

Does any one suppose it possible to gather a ripe cherry in such a place? If he does, he is greatly mistaken. He would find the blackbird a much more dexterous gatherer than himself, and one who would relieve him from all trouble with his cherry crop. In such a case the birds must be trapped, or the crop abandoned. There would be no alternative.

But such instances are special, and form the exception, not the rule. Every day's experience tells us that birds are among the most efficient instruments of Providence for destroying the vermin that would otherwise overrun us. And people may rely upon it, that they can not more effectually encourage the ravages of those insidious foes, than by waging war upon the creatures which naturally feed upon them.

WIESBADEN.



WIESBADEN, or Wisbaden, is one of the most frequented watering places in the inland part of Germany. The central part of the building is the ball-room.

The left wing is entirely occupied by gambling-tables, of which that appropriated to roulette is the favorite; and so great are the profits derived, that the lessees pay 30,000 florins annually to the Duke of Nassau, for the privilege of keeping the bank. The right wing is a sort of café, or dining-room, in which all kinds of refreshments are to be obtained; and it is never used for any other purpose. Although the exterior of the building is exceedingly plain and simple, the interiors of the wings are neat and convenient, and the ball-room is handsome, and even splendid. The floor is inlaid with various woods; a row of marble columns, of the Corinthian order, runs up each side of the room, and supports a light and spacious gallery; a considerable number of marble busts and statues are ranged beneath this double colonnade; the roof is vaulted, and though rather

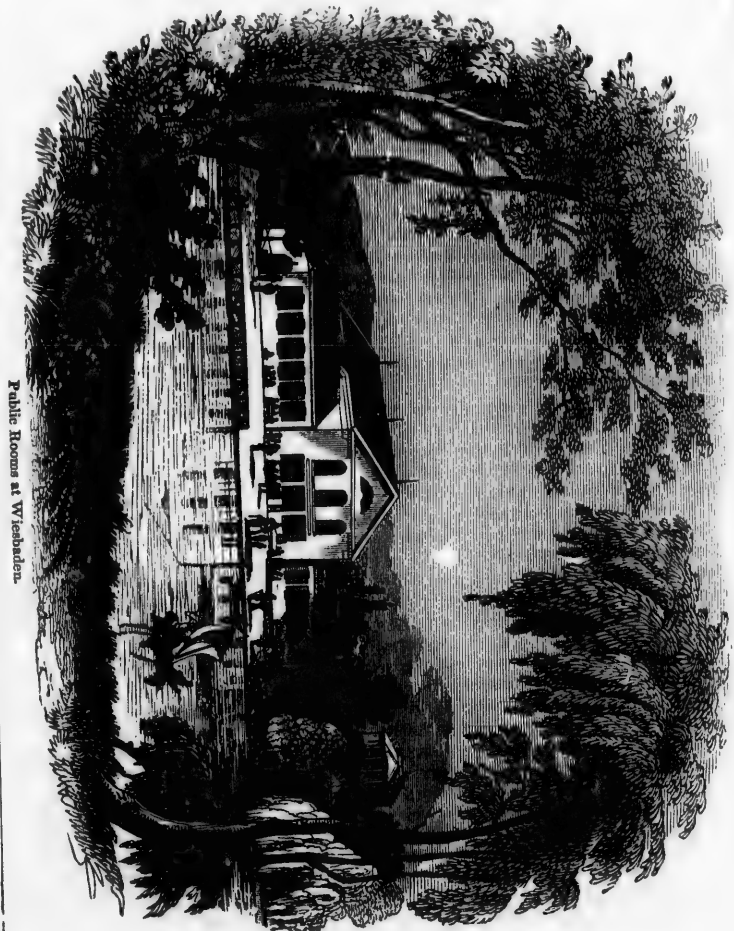
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Public Rooms at Wiesbaden.



sombre in color, is tastefully decorated, and the whole apartment is of large dimensions.

These three rooms, and the park which is attached to them, serve as the usual place of assembly for the numerous visitors during the season; and when it is recollected that many thousands annually congregate from all parts of Europe to this little town, it will be evident that some such point of reunion is required. The famous boiling springs of mineral water, and the baths which they supply, are in the town itself, at some little distance from the public rooms; but as not more than one person in fifty comes to Wiesbaden for any other purposes than those of amusement or intrigue, that circumstance is of but little consequence. It is, besides, the fashion for those invalids who bathe or drink the waters, to visit the spring very early in the morning, seldom later than half-past seven or eight, for the Germans keep much earlier hours than they do in England, and all strangers are obliged in some measure to conform to their habits; so that the means to be taken for the restoration of their health do not interfere with the amusements of the day.

Wiesbaden is full of large and handsome hotels, to nearly every one of which is attached a *table d'hôte*, or ordinary, where strangers dine; for at Wiesbaden it is not the custom to take dinner in private.

Wiesbaden is situated in a hollow, surrounded on all sides by distant hills, and in that respect bears a great resemblance to Cheltenham, England. Though not very far distant from the Rhine, the rising ground between the town and the river is sufficient in height and extent to protect it from the damps which rise from that mighty stream in the evenings of summer and autumn; and its low position, together with the constant though inconsiderable quantity of heat which is given out by the boiling springs, tend in some degree to soften the severity of a German winter.

Wiesbaden, from its late increase in population and in buildings, and from the sum of money annually spent there by its crowds of idle visitors, has now become the most important town in the principality

of Nassau. The residence of the reigning duke (*Hersog*) is at Biberich, a small village on the eastern bank of the Rhine; and the sovereign is also the proprietor of a great part of his own dominions. This little realm is about four or eight miles in length and twenty-eight in breadth; and though it is, for the most part, woody and mountainous, yet it is not without fine arable and meadow land. The duke derives great revenues from the numerous favorite watering-places which are scattered about his principality: the sale of the famous Selters waters alone produces great profit. Beside his palace at Biberich, he has a handsome and convenient hunting-palace called the Platz, which is situated on the summit of a wooded hill about three miles out of Wiesbaden. From the top of the house there is a very fine and extensive view, commanding a long reach of the Rhine; and the towns of Mayence, Biberich, Darmstadt, Wiesbaden, and Frankfurt, are included within its horizon.

COMMERCE.

In the extended sense of the term, commerce includes within its range the whole trade and intercourse of nations with each other, and explains how the mutual wants of mankind occasion the exchange of the productions of one country for those of another, its influence on the character of nations, and to what extent it has aided in the refinement of a people by the introduction of the arts of civilized life. The history of commerce in all its ramifications is important to every man who desires to become an intelligent and accomplished merchant.

In view of its great importance, the regulations of commerce constitute prominent articles in all treaties between nations, whether professedly commercial or otherwise, and they are also among the principal subjects of legislation in all civilized states and kingdoms. Commerce is one of the great sources of public revenue, and one of the chief causes of the wealth of nations and of individuals. The mer-

chants of ancient Tyre and Sidon, two famous cities of Phœnicia, from their wealth acquired in the pursuits of commerce, were called "merchant princes," and the Florentine family of Medici, acquired as high distinction for their mercantile enterprise as their political eminence, and while exercising the highest offices of the republic, they did not think it beneath them to attend to the affairs of the counting-room. There is no condition of life more honorable than that of the intelligent, honest, industrious, and enterprising merchant; no occupation in which a man can make himself more useful.

Commerce is so intimately connected with agriculture, manufactures, and the mechanic arts, that they may be said to move hand in hand. Without proper attention to the pursuits of agriculture, commerce would be extremely limited in its operations; and without commerce, agriculture would lose its chief support. Without commerce, manufactures would languish; with it, they find their way into every corner of the known world. Freighted with the productions of our prolific soil, and of our manufactories, the sails of American vessels whiten every sea, and are spread to every breeze.

MAY.



On the first day of this month, the Romans held a feast in honor of Maia, the mother of Mercury; and by some it is supposed that this was the origin

of the name May. By the Saxons it was called *Tri-milki*; the pasturage in this month being so abundant as to enable them to milk their cows *tri*, or three times in the day.

May has ever been the favorite month of the year in poetical description; but the praises so lavishly bestowed upon it, took their rise from climates more southern than ours. In such, it really unites all the soft beauties of spring with the ra-

diance of summer, and has warmth enough to cheer and enliven, without overpowering. With us, especially since we have reckoned by the new style, great part of the month is yet too chill for a perfect enjoyment of the charms of nature; and frequent injury is done to the flowers and young fruits during its course, by blights and blasting winds. May-day, though still observed as a rural festival, has often little pleasure to bestow but that arising from the name. In a very elegant poem, entitled "The Tears of Old Mayday," this newer rival is thus described:—

Not wonder me, that Nature's bashful face
And her soft smiles her rude embraces fear;
Is she the victim of April's wayward race,
The daughter of the unripened year?

With her and sunshine in her fickle eyes;
With her now smiles, proclaiming treacherous peace;
With her now harboring in their thin disguise,
The pest that riots on the spring's increase.

The month, however, on the whole, is even in this country sufficiently profuse of beauties. The earth is covered with the freshest green of the grass and young corn, and adorned with numerous flowers opening on every side. The trees put on all their verdure; the laburnum horse-chestnut, and the alder, blossom in this month. The hedges are rich in fragrance from the snowy flowers of the hawthorn; and the orchards display their highest beauty in the delicate blush of the apple-blossoms. All this scene of beauty and fertility is however sometimes dreadfully ravaged by the blights which peculiarly occur in this month. The mischief seems to be done chiefly by innumerable swarms of very small insects, which are brought by the northeast winds.

FIRESIDE MUSINGS.

It is a moment of peril to the young child, when first he breaks from the guiding hand of his watchful mother, and stands unprotected and alone, depending on his own strength and trusting in his own judgment. One short step, inadvertently taken, may, by laying him prone on the earth, at once destroy the charm of his new position, and shatter his self-confidence,

that moving-spirit of all great enterprise; while another taken in deliberation and foresight, may give him proper reliance in his own powers, and place him beyond the reach of harm. So it is with the immortal mind; that moment must arrive when it bursts asunder the bond that has bound it, breaks from the controlling hand of parent or guardian, and in the full consciousness of its own intellectual powers, stands forth, alone, to think, to will, and to reason for itself. It is a fearful moment for the mind, when sophistical, shallow theories, narrow and false doctrines, appear before it, in their enticing, gorgeous garbs, and when vice itself lies hid beneath the bright pageant.

It is a fearful struggle to decide which is the right—to feel that it is not enough to have been reared in a faith, to have had the same doctrines instilled, drop by drop, into the infant—to have been given precepts and blindly to have followed them—to have received the judgments, the principles, the very sentiments of others, and to have embraced them in the cold ignorance of an unthinking mind. It is sad, indeed, to feel that the dearest ties of nature are not sufficient, *alone*, to strengthen or retain a spark of the affections born within us; but it is a pleasing reflection that the mind can no longer be led, that it has arrived at that point when it *must* assert its own power, and must influence others with its own dignity. God of heaven help the weak in that hour, and the strong too, for at heart we are frail, and need his aid sadly! But when the mind, after deep, serious thought, long study, and earnest prayer, has arrived at its own conclusion, and adopted *one* consistent course, to the exclusion of all others—in the path in which it has been reared and tended is abundance for another—if the sweet memory even of its infancy is cast aside at once and for ever, have we a right to censure? Is it not, oh! far nobler to soar above the unworthy trammels of habit, and in the broad, open sunshine of our own intellects, mark, decide, and act, for ourselves? Where is the exercise of firm resolution, Christian fortitude, and lofty impulse, if we are *bound* to tread in one path, in the calmness of indifference, and the lethargy of

ignorance. Oh! we are not endowed thus richly with exalted faculties, if it were intended by Heaven they should be dormant within us. No! let us investigate deeply and reflect seriously; let us concentrate the noble powers of our cultivated minds upon the greatest, the sublimest subject that ever filled the human mind. And in the meantime, let us not condemn unmercifully, but respect, esteem, and emulate, those who have had the moral courage, high spirit, and independence, to swerve from the belief in which they have perhaps, blindly lived, and before the whole world to avow the beautiful truths that have been revealed to them in their deep and prayerful research.

THE BISON.



HIS remarkable species of ox is peculiar to North America. Until of late years, it was very generally considered that the domestic ox, the wild bull (*urus*) of Europe and Asia, and the American bison, were only varieties of the same species, or, in other words, that the domestic ox was the *urus* altered by civilization, and that the bison was the *urus* altered by climate. This was the opinion of Buffon, Pallas, and other distinguished naturalists. The identity of the *urus* and the bison being assumed, it became a question of somewhat difficult solution how these animals migrated from the old to the new world. Many ingenious theories were framed to meet the circumstances, but the necessity for these speculations has been superseded by the discovery made by Cuvier, that the bison of America is really a species distinct from the *urus*; and he has indicated the very important differences by which the distinction is established.

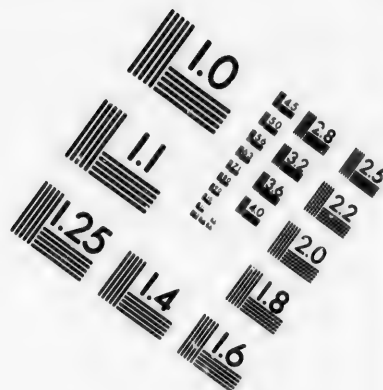
We may consider the bison as characterized by fifteen pair of ribs (the wild bull has only fourteen) and by the immense disproportion between its fore and hind quarters. The latter distinction is partly occasioned by the great hump or

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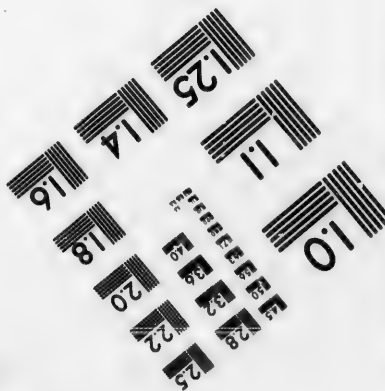
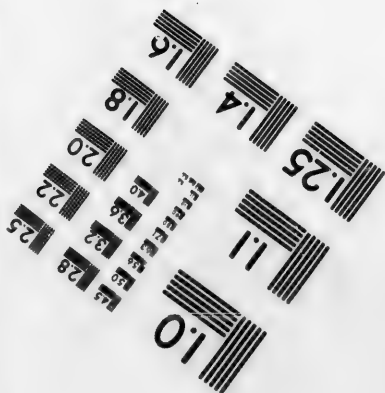
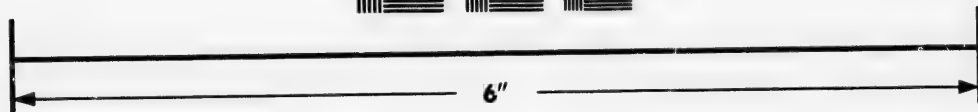
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Resolution test chart showing patterns of vertical and horizontal lines with numerical values ranging from 1.0 to 4.0.



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The American Bison.

projection over its shoulders. This hump is oblong, diminishing in height as it extends backward, and giving a considerable obliquity to the outline of the back. The hair over the head, neck, and fore part of the body, is long and shaggy, forming a beard beneath the lower jaw, and descending below the knee in a tuft. The hair on the summit of the head rises in a dense mass nearly to the tip of the horns, and directly on the front is curled and strongly matted. The ponderous head, rendered terrific by its thick, shaggy hair, and streaming beard, is supported upon a massive neck and shoulders, the apparent strength of which is more imposing from the augmentation produced by the hump, and the long fall of hair by which the anterior parts of the body are covered. This woolly hair is remarkable, not less for its fineness than its length. The difference between the winter and the summer coat of the bison consists rather in the length than in the other qualities of the hair. In summer, from the shoulders backward, the surface is covered with very short, fine hair, smooth and soft as velvet. Except the long hair on the fore parts, which is to a certain extent of a rust color or yellowish tinge, the color is a uniform dun. Varieties of color are so rare among the species, that the hunters and Indians always regard any apparent difference with great surprise. The fleece or hair of a full-grown bison, when separated from the skin, is usually found to weigh about eight pounds, according to Charlevoix. The horns are shorter than in any other species, nearly straight, sharp-pointed, exceedingly strong, and planted widely asunder at the base, as in the common bull. The tail is almost a foot long, and terminates in a tuft, which is black in the males and red in the females. The eyes are large and fierce; the limbs are of great strength; and the appearance of the animal is altogether exceedingly grim, savage, and formidable. According to Hearne, the size of the bison is, on the average, less than that of the urus, but exceeds that of every other species of the ox. It has been known to weigh 1,600 and even 2,400 lbs.; and the strongest men are said to be unable, singly, to lift one of the skins from the ground. The

female is much smaller than the male; she has not so much of the long hair in front, and her horns are not so large, nor so much covered by the hair. The males and females associate from the end of July to the beginning of September; after which the females separate from the males, and remain in distinct herds. They calve in April. The calves seldom leave the mother until they are a year old, and sometimes the females are seen followed by the young of three seasons.

The bisons generally seek their food in the morning and evening, and retire during the heat of the day to marshy places. They rarely resort to the woods, preferring the open prairies where the herbage is long and thick. They also associate in vast troops, led by the fiercest and most powerful of the bulls. In both these respects their habits differ from those of the urus, which leads a solitary life in the deepest gloom of the forest. The herds of bisons are frequently of astonishing density and extent. While feeding, they are often scattered over a vast surface; but when they move forward in mass, they form a dense, impenetrable column, which once fairly in motion is scarcely to be turned. They swim large rivers nearly in the same order in which they traverse the plains; and when flying from pursuit, it is in vain for those in front to make a sudden halt, as the rearward throng dash madly forward, and force their leaders on. The Indians sometimes profit by this habit. They lure a herd to the vicinity of a precipice, and setting the whole in rapid motion, they terrify them by shouts and other artifices to rush on to their inevitable destruction. The chase of the bisons, indeed, constitutes a favorite diversion of the Indians, numerous tribes of whom may be said to be almost entirely dependent on these animals for all their necessities of life. They are killed either by shooting them, or by gradually driving them into a small space, by setting fire to the grass around the place where the herd is feeding. They are much terrified by fire, and crowd together to avoid it; and they are then killed by bands of Indians, without any personal hazard. It is said that on such occasions, 1,500 or 2,000 have sometimes been killed at a time.

The flesh of the bison is coarser grained than that of the domestic ox, but is considered by hunters and travellers as superior in tenderness and flavor. The hump is highly celebrated for its richness and delicacy, and it is said, when properly cooked, to resemble marrow.

The skins of the bisons are of a loose and spongy texture; but when dressed in the Indian manner, with the hair on, they make admirable defences against the cold, and may be used for blankets. They are called buffalo robes; the term buffalo being generally, but inaccurately, applied to the bison. The wool of the bison has been manufactured into hats, and has also been employed in making coarse cloth of a very strong and durable texture.

GEOLOGY,

ITS OBJECTS AND ADVANTAGES.



OW this earth has been created, and its mountains and valleys received the forms they now possess, is an inquiry which is natural to

He can not be indifferent to the structure of that globe which was the birthplace of his race, the theatre of all those mighty deeds which adorn or disgrace the annals of humanity. With its history his own is closely connected, in all its most important points. Profane history soon ceases to follow back the chain of human affairs, and the origin of nations is lost in obscurity. The Scriptures record rather the moral and religious history of the species, than the physical or political fortunes of the various tribes and nations into which it was divided. They no doubt contain the earliest and most authentic accounts of the creation and first actions of men; but these, though fully sufficient for their purpose, have not satisfied human curiosity—ever desirous to know more than has been revealed. Hence, at all times, in-

quiries into the origin of the world and the creation of the human race have engaged the attention of both the learned and the unlearned.

Nor are such inquiries, when pursued in a right spirit, improper. The word and the works of God never can contradict each other, and the more fully each is searched out and understood, the more clearly will they confirm the great truth, that both have one and the same all-wise Author. Geologists have often been accused of infidelity, and of attempts to destroy the authority of the Bible; but we believe that this accusation is false, and that no foundation for it will be found in the writings of any of the great men who have thoroughly investigated its principles. Disappointed theorists who could not refute the arguments of their opponents, have sometimes accused them of opposing scripture; but such groundless affirmations deserve as little regard as those of the men who condemned Galileo for affirming that the earth moved, while the sun stood still. Astronomy has now proceeded far beyond what even the imagination of the Italian philosopher could have conceived; yet the truth of the Bible is not affected; and, in like manner, we may rest assured, that when geology has expanded to its full dimensions, the authority of revelation will remain wholly unimpeached.

Geology is one of the most recent of the sciences. A century ago it could hardly be said to exist, and the theories of Leibnitz, Burnet, and Buffon, were equally fanciful and unsupported by facts, as those of the ancient Greeks. Of late, however, it has entered on a new and more scientific path. It no longer inquires how "in the beginning God created the heavens and the earth;" but assuming that as a fact beyond all doubt or appeal, confines its investigations to the present structure of the globe, and the traces of revolutions which it has undergone. It has now ceased to be a romantic theory, built up on the fancy of speculators, and has taken its place among those inductive sciences to which the genius of Bacon has given the law and rule of investigation. Men must now observe and inquire, before they are allowed to speculate. Be-

fore forming a theory of the earth, they are expected to know the facts which the earth's crust exhibits, and which their theory must explain. No one would venture now to write quarto volumes on rocks, without having studied them in the fields, and even to boast of this as a qualification for his task. Geologists must now come into closer contact with the works of the great Creator, and thus learn more fully their own weakness and ignorance; and they have thus become more deeply impressed with that spirit of reverent humility which becomes the true philosopher.

The advantages to be derived from the study of any science can seldom be understood till its principles are known, and should follow, not precede, the exposition of these. In some respects this is true of geology; but many of its applications are almost self-evident. In the mines, geology had, in a great measure, its birth, and many of its most important facts have been observed there. The theory of veins and stratification, with the peculiar distribution of the valuable ores and minerals, were at least partially known to practical men before they found a place in the systems of geologists. But in these they appear in a new form, and with new light. They are no longer mere facts, standing solitary and alone, for which no reason can be assigned and no cause given. They now form part of a well-connected system, and the miner is taught not only when they should occur, but also where he may expect exceptions to the general rule. The names of many rocks are derived from the local terms used in particular mining districts; but science has given precision to these terms, and, from words hardly understood at a few miles' distance, has rendered them intelligible over the whole civilized world. The facts observed in distant places and countries can thus be described in uniform language, and compared with each other, so that what in them is merely local, may be separated from what is universal. Hence the system of Werner, with all its errors, was of great use in the progress of the science, by enabling inquirers in different countries to understand each other, which they had never previously been able to do.

But geology gives to the miner means of distinguishing rocks which he did not formerly possess, and thus of knowing where minerals may or may not be expected to occur. This is one of its most evident advantages, and one in which the whole community is more or less interested. Ignorant miners were often guided in their search for ores or coal by certain characters which were of little value, except in a few localities, and induced men to spend much money seeking for mineral treasures in places where a geologist could have said at once that they were not to be found. In many places in England and Scotland, mines may be seen, driven for hundreds of yards through the hardest rocks, in the expectation of discovering coal, though men of science know that it is never found in such circumstances, and though the whole succession of rocks is laid open by some neighboring river or ravine. Mr. Murchison, when examining the geological structure of Wales, met with repeated instances of this kind, and the poor farmers, after ruining themselves in the vain research, often complained to him of their landlords, who would not continue the profitless pursuit. "Ah! if our squires were only men of spirit, we should have as fine coal as any in the world," was the frequent remark of such speculators, wholly untaught by their own painful experience. Yet a few popular lessons in geology would have dissipated the vain delusion, and taught these men that they were spending their money and labor to no purpose. Even in the south of Scotland, where the mass of the people are well educated, many similar attempts have been made on rocks of the same geological formation, and of course, with equal want of success. It is a singular fact, that these explorers are usually misled by a variety of black slate, composed almost entirely of flint, and hence as hard as iron, and wholly incombustible. It is, in truth, well described by a sanguine excavator of this class, who said to his minister, "It is as black as a coal, as hard as a coal, and as heavy as a coal; in short, it is coal altogether—except that it will not burn."

In these instances, geology would have told these persons that coal worth work-

ing never occurred in such rocks, and thus saved them their dear-bought experience. But it not only tells where coal is not, but also where it is to be found. It makes known the order and succession of the various rocky beds that make up the crust of the earth, and thus renders its interior almost transparent to the eye of science. The practical geologist examines the surface of a country, and finds it composed of a species of rock which he knows lies higher in the series than coal. From its fossil remains, the shells or plants it contains, he knows its place in the earth's crust, and hence the probability of coal lying below it. Such scientific divining has, in many instances, proved successful, and many undertakings which merely practical men ridiculed, have produced great wealth to the bold theorist who dared to despise their warnings. Mr. Murchison, in the work already alluded to, mentions many instances of valuable coal-pits sunk through beds of red sandstone, in places where, a few years ago, no one suspected this mineral to exist. In the north of England many similar cases occur. There are examples, too, of valuable minerals, not concealed in the bowels of the earth, but lying open on its surface, having been wholly neglected, till some competent geologist was led to the spot by accident. In Unst, the most northern of the British isles, great quantities of a particular rock were strewed over the ground, and so little regarded as to be used for constructing walls or fences. Dr. Hibbert found that this was the chromate of iron, from which chrome yellow, so much used in manufactures, is prepared, and these neglected stones immediately became objects of commerce, and a source of large income to the proprietors.

These few instances show the advantages which may result from the study of geology. The interests of private individuals are not only promoted by it, but also those of the whole nation. Many instances might be produced of the benefits it has conferred both on private individuals and the community, and other applications of its principles to various professions and pursuits might be noticed.

But few can directly participate in these advantages, compared to the number of

those to whom it may prove a copious source of intellectual gratification and moral improvement. Though the study of geology may be begun in books and class-rooms, it must be pursued in the open fields. The descriptions and theories of our instructors must be compared with the realities and facts of nature. It is thus only that progress can be made in the science, and its true advantages realized. We must cease to listen to the voice of men, that we may hear the Creator speaking to us in his works. Nor is it to every part of these works alike that the attention of the geologist is turned. The verdant meadow or the fertile plains, covered with rich and luxuriant vegetation, do not escape his notice, and in his eyes have a meaning and a worth beyond that observable to the common crowd of men. Their beauty and fertility is as open to him as to the painter, poet, or agriculturist; but, beside this, he sees in them parts of a great whole, and can trace back their history, through many revolutions, to the time when they were, perhaps, the bottom of a lake whose waters have disappeared, the estuary of a river which has ceased to flow, or a portion of the channels of the ocean, above which they are now far elevated. But the pursuits of the geologist lead him to prefer other scenes, of a wilder, more rugged, and less generally attractive nature. The rocky seacoast, where the land and waters carry on their never-ending contests for the supremacy, is to him full of instruction. In the lofty cliffs, sections are laid open he would in vain look for elsewhere, and the mouldering pinnacles of rock speak to him of events older than the pyramids, and chronicled in characters more enduring and intelligible than their sculptured hieroglyphics. The narrow ravine, where the foaming river can scarce force its way amid the projecting rocks, has many lessons to impart to him. In its rude walls he sees the various strata concealed beneath the deep soil and abundant crops of the neighboring plains; while the form and depth of the channel tell of the power of aqueous erosion, and form a kind of natural chronometer, by which the past duration of our present continents may be estimated.

But the favorite resort of the geologist is the lofty mountains and their lone valleys. In their towering rocks and majestic precipices he sees clear traces of those tremendous forces which have agitated and convulsed the globe. In searching out these, he is led into wild scenes of the most romantic beauty, which have been for ages concealed in the remote wilderness. He thus sees and enjoys much which is hid from others, who have not this motive to explore these lonely solitudes. Here also his science gives meaning to natural appearances, which to other men seem unintelligible and repulsive. In the rude blocks scattered over a mountain-side, he finds a confirmation or confutation of a theory of the universe, or an explanation of facts observed in some remote quarter of the globe. No one can look, without emotion, on the granite pinnacles of Arran, rising from the broad estuary of the Clyde, but they have assuredly more than a twofold interest to those who see in that small island a model of the whole earth, and a test of all the theories that have been proposed, to account for its phenomena.

Geology thus makes us acquainted with some of the most interesting parts of that great globe we inhabit, and enables us to find pleasure and instruction even in its rudest and most barren districts. The bleakest moor loses its loneliness, and the sandy down is not so uniform or devoid of meaning as to disgust us. In this way, travelling is rendered doubly instructive and amusing, and is changed from a mere mean of spending time or gratifying an idle and ignorant curiosity, into a source of high moral and intellectual improvement. It is indeed remarkable, when we look to the number of persons who in the present day wander over the length and breadth of our land, how few take any care to derive from their journeys the full amount of amusement and information they are fitted to convey. It is not enough to visit remarkable places, to stand on the ground consecrated to virtue and patriotism, unless we participate in these feelings and have our good resolutions strengthened by the emotions they inspire. So, also, in visiting beautiful and sublime scenery, it is not sufficient to yield up our

minds in listless indolence to the pleasurable emotions they excite. Such scenes are calculated to inspire higher sentiments, and we forfeit half their use and value when our minds are not prepared to receive these. Nothing stands alone in nature; no part of the vast universe exists solely for itself. Every portion of it is connected with those around, and bears to them innumerable relations. The true import of the mountains and hills can only be understood when viewed in connexion with plains and valleys; and the significance of the sandy deserts of the Sahara, may be read in the genial climate of our own continent. But it is geology and its connected sciences, which hold the key to this branch of wisdom, and can alone open their treasures to men. It not only unfolds the present purpose and uses of various portions of creation, but exhibits their connexion with what precedes and follows them. It thus lays open to us wider and more extended views of the divine Providence, and proves that even the physical welfare and comfort of man had been foreseen and attended to ages before he was called into being. For to what else than the wise benevolence of the Creator can we ascribe those stores of coal, and iron, and limestone, accumulated in such inexhaustible abundance, and brought into that contact with one another which renders them available to the uses of men? Had each existed in equal or even greater profusion, but widely separated from the other, had the iron ore been found without the coal and limestone necessary to convert it into the precious metal, how far inferior would have been the advantages derived from them! What a blight would it cast on the industry and commerce of the world.

WISDOM OR FAITH.—Does not every architect complain of the injustice of criticising a building before it is half finished? Yet who can tell what volume of the creation we are in at present, or what point the structure of our moral fabric has attained? While we are all in a vessel that is sailing under sealed orders, we shall do that which is best for us, if we confide implicitly in our government and captain.

NEW ZEALAND.



NEW ZEALAND, filling a large space in the southern Pacific, extending from 34° to 47° south latitude, and from 167° to 179° east longitude, was discovered by Tasman, a Dutch navigator in 1642. The vast southern Pacific was then an almost unexplored region, and though nearly two centuries had elapsed since European navigators discovered the passage to India by the cape of Good Hope, the mine of enterprise which was then opened still continued to attract their chief attention, and to satisfy their maritime ardor. The reputed existence of a fifth continent, placed in the southern hemisphere, and vague rumors of its supposed rich productions, inflamed the imagination of geographers, and proved a wholesome stimulus to the progress of discovery. Tasman was despatched by Anthony Van Diemen, governor of the Dutch East Indies, and sailed on the 14th of August, 1642, from the Port of Batavia, in company with another vessel under his command. He first discovered the island now known as Van Diemen's land; and pursuing his voyage toward the east, again saw land on the 13th of September, and following the line of coast anchored next day within a large bay, here for the first time he had an opportunity of seeing the natives, who came out in two canoes, and hailed the strangers in a strong rough voice, but they did not approach very near to the ship. On the following day, a canoe with thirteen men came within a stone's throw, but no temptations could induce them to come on board the ship. Tasman describes them as of the common stature and strong-boned; their complexion between brown and yellow, and their black hair tied up in the Javanese fashion, on the crown of the head, with the addition of a large feather stuck therein. Seven other canoes in the meantime put off from the shore, and Tasman, doubtful of their intentions, hoisted out one of his boats, which being manned by a quartermaster and six seamen, was

on its way to the other ship to put her commander on his guard, when the canoes ran violently in upon the boat and nearly upset it, at the same time making a desperate attack upon the boat's crew. Three of the seamen were killed and one mortally wounded. The savages then hastily retreated, carrying with them one of the dead bodies. Tasman immediately weighed anchor, and gave the place the name of the Bay of Murderers. Thus inauspiciously did the first interview of the New-Zealanders with Europeans terminate. Tasman had not been able to bring his guns to bear upon the retreating islanders, and the savages could not as yet appreciate the hostile power which they had aroused. When the ship had got under sail, twenty-two canoes followed her, and advancing within range of the guns, were fired upon, and one man being killed, and the shot striking the canoes, they turned toward the shore. The man who was killed bore a white flag in his hand. Tasman's course precluded him from ascertaining that what he took for a large bay was the strait separating the northern from the southern island, which unitedly are known under the name of New Zealand. He therefore naturally looked upon the other island as a continuation of the same land, and that in fact he was upon the shores of the new continent, believed to exist in this part of the southern ocean. "It is," he says, "a very fine country, and we hope it is a part of the unknown south continent." One of his countrymen had made a similar mistake about a quarter of a century before, having come in sight of land which he conceived to be part of a continent, and to which he gave the name of Staten land, or State's land. Just at this time, or a few months afterward, the supposed continent was discovered to be an island of no great extent; but Tasman believed that he had also fallen in with a portion of Staten land or the southern continent. When it was ascertained that the country called Staten land was only an island, Tasman's discovery received the name of New Zealand. On the 4th of January he passed the north-western extremity of New Zealand, which he named Cape Maria Van Diemen, in honor of a lady to whom it is said he was

Canoe and Natives off Capo Wangari.



attached, the daughter of the governor under whose auspices the expedition was projected.

It was above a century after Tasman's voyage before New Zealand was again visited by Europeans; but on the 6th of October, 1769, Captain Cook, then making his first voyage of circumnavigation in the *Endeavor*, came in sight of the island.

Captain Cook approached New Zealand from the west, on his passage from the Society islands, while Tasman had reached it from the east. The general opinion on board the *Endeavor* was that they also had found the "*Terra Australis Incognita*." On the 8th Cook anchored, and soon after went on shore accompanied by Mr. (afterward Sir Joseph) Banks and Dr. Solander, and were unhappily attacked by the natives, on whom they were compelled to fire in self-defence. An attempt at friendly intercourse was made the day following, but though aided by the persuasions of a native of Otaheite on board the *Endeavor*, it proved unsuccessful. The *Endeavor* did not leave this part of the coast without an unfortunate collision with the natives, who fought in the most obstinate manner against an unequal force, the contest ending in four of the savages being killed. Two youths, one aged 19, and the other 11, were taken on board the ship, where they expected instant death, but being kindly treated, soon recovered their spirits. Being unable to obtain provisions at this place, to which Cook gave the name of Poverty bay, the anchor was weighed, and the *Endeavor*, pursuing the line of coast, came to the supposed bay in which Tasman had anchored, and which Cook found to be a strait separating the islands: in the maps it bears the name of Cook's straits.

The next epoch in the intercourse with New Zealand, arose out of the proximity of the English settlements in New South Wales, founded at the close of the last century, the distance from them being about 1,200 miles; while New Zealand is not more than two or three days' sail from Norfolk island, where a settlement was commenced in 1793. The natives of New Zealand have frequently visited Sydney, Port Jackson, and other Austra-

lian ports. At a somewhat later period, the ships engaged in the South sea whale fishery, began to frequent New Zealand; and the government at New South Wales availed themselves of this medium to send presents of cattle, grain, and such other articles as were calculated to promote the social improvement of the natives.

A third stage in the intercourse of New Zealand with civilized nations is marked by the arrival of Christian missionaries in 1814, after they had remained several years in New South Wales. The Church missionary society commenced this work, in which other societies have engaged, and their operations during the last twenty-five years, have had some important influence on the New Zealand character. The island has also become an active scene of commercial enterprise, and as the Australian colonies increase in wealth and population, New Zealand will be brought into still closer connexion with the habits and wants of civilization.

GIGANTIC BIRDS OF FORMER TIMES.



T a late meeting of the British association, a very interesting paper was furnished by Mr. Bonomi, on certain gigantic birds of former times. The existence of slabs of the new red sandstone of America, marked with footsteps of huge birds is well known. As some of these animals are calculated to have been fifteen feet high, they were at first supposed to have no parallel in the present state of nature; but this was soon found not to be the case, as several specimens of the bones of a bird not less gigantic have been sent home from New Zealand, where it is spoken of by the natives as existing under the name of Moa. There have also been discovered by Captain Flinders, on the south coast of New Holland, in King George's bay, some very large nests, measuring twenty-six feet in circumference, and thirty-two

inches in height, resembling, in dimensions, some that are described by Captain Cook, as seen by him on the northeast coast of the same island, about fifteen degrees south latitude. It would appear, by some communications made to the editor of the London Athenæum, that Professor Hitchcock of Massachusetts had suggested that these colossal nests belonged to the Moa.

In connexion with these discoveries is another from an opposite quarter. "Between the years 1821 and 1823, Mr. James Burton discovered on the west coast, or Egyptian side of the Red sea, opposite the peninsula of Mount Sinai, at a place called Gebel Ezzeit, where, for a considerable distance, the margin of the sea is inaccessible from the desert, three colossal nests within the space of one mile. These nests were not in an equal state of preservation; but, from one more perfect than the others, he judged them to be about fifteen feet in height, or as he observed, the height of a camel and its rider. These nests were composed of a mass of heterogeneous materials, piled up in the form of a cone, and sufficiently well put together to insure adequate solidity. The diameter of the cone at its base was estimated as nearly equal to its height, and the apex, which terminated in a slight concavity, measured about two feet six inches, or three feet in diameter. The materials of which the great mass was composed, were sticks and weeds, fragments of wrecks, and the bones of fishes; but in one was found the thorax of a man, a silver watch made by George Prior, a London watchmaker of the last century, celebrated throughout the East, and in the nest or basin at the apex of the cone, some pieces of woollen cloth and an old shoe.

That these nests had been but recently constructed, was sufficiently evident from the shoe and watch of the shipwrecked pilgrim, whose tattered clothes and whitened bones were found at no great distance; but of what genus or species had been the architect and occupant of the structure, Mr. Burton could not, from his own observation, determine. From the accounts of the Arabs, however, it was presumed that these nests had been occupied by remarkably large birds of the stork

kind, which had deserted the coast but a short time previous to the period of Mr. Burton's visit."—"To these facts," said Mr. Bonomi, "I beg to add the following remarks:—

"Among the most ancient records of the primeval civilization of the human race that have come down to us, there is described in language the most universally intelligible, a giant. stork, bearing, with respect to a man of ordinary dimensions, the proportions exhibited in the drawing before you, which is faithfully copied from the original document. It is a bird of white plumage, straight and large beak, long feathers in the tail; the male bird has a tuft at the back of the head, and another at the breast; its habits apparently gregarious. This very remarkable painted basso-relievo is sculptured on the wall, in the tomb of an officer of the household of Pharaoh Shufu (the Suphis of the Greeks), a monarch of the fourth dynasty, who reigned over Egypt while yet a great part of the Delta was intersected by lakes overgrown with the papyrus—while yet the smaller ramifications of the parent stream were inhabited by the crocodile and hippopotamus—while yet, as it would seem, that favored land had not been visited by calamity, nor the arts of peace disturbed by war; so the sculpture in these tombs intimate, for there is neither horse nor instrument of war in any one of these tombs. At that period of the building of the great pyramid, which, according to some writers on Egyptian matters, was in the year 2100 B. C., which, on good authority, is the 240th of the deluge, this gigantic stork was an inhabitant of the Delta, or its immediate vicinity; for, as these very interesting documents relate, it was occasionally entrapped by the peasantry of the Delta, and brought with other wild animals, as matters of curiosity, to the great landholders or farmers of the products of the Nile—of which circumstance this painted sculpture is a representation, the catching of fish and birds, which in these days occupied a large portion of the inhabitants. The birds and fish were salted. That this document gives no exaggerated account of the bird, may be presumed from the just proportion that the quadrupeds, in the same picture,

bear to the men who are leading them; and, from the absence of any representation of these birds in the less ancient monuments of Egypt, it may also be reasonably conjectured they disappeared soon after the period of the erection of these tombs.

With respect to the relation these facts bear to each other, I beg to remark, that the colossal nests of Captains Cook and Flinders, and also those of Mr. James Burton, were all on the seashore, and all of those about an equal distance from the equator. But whether the Egyptian birds, as described in those very ancient sculptures, bear any analogy to those recorded in the pages of the great stone book of nature (the new red sandstone formation), or whether they bear analogy to any of the species determined by Professor Owen from the New Zealand fossils, I am not qualified to say, nor is it indeed the object of this paper to discuss; the intention of which, being rather to bring together these facts, and to associate them with that recorded at Gezah, in order to call the attention of those who have opportunity of making further research into this interesting matter."

CATARACT AT FOSSVÖLLUM, ICELAND.

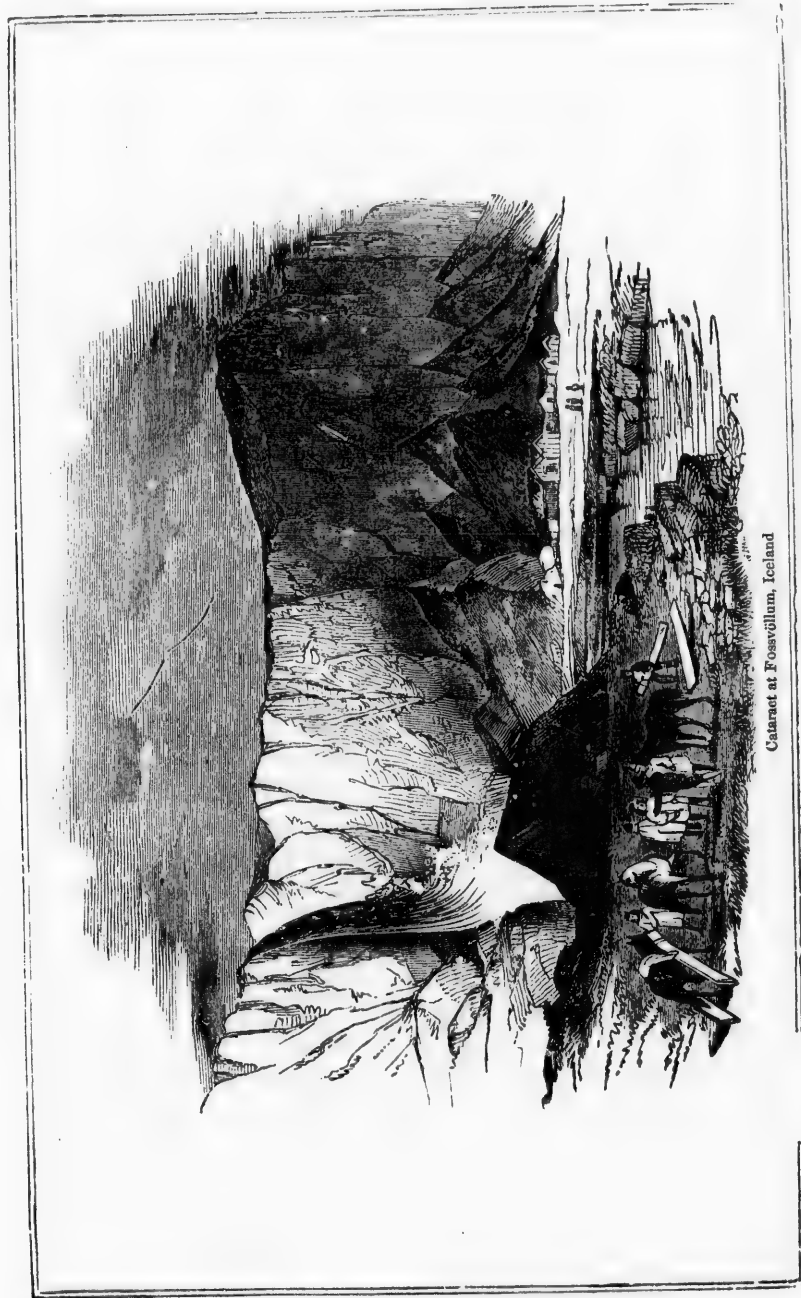


THE volcanic character of the island of Iceland, and the many convulsions which it has experienced at various periods, rendering asunder the mountains, throwing obstructions in the way of the rivers, and producing rents and chasms in the valleys, explain the origin of the many waterfalls and cascades which the traveller meets with in that bleak and desolate country. In many parts, especially in the neighborhood of volcanic mountains, cataracts abound, generally presenting features of the most terrific but picturesque character. There are many worth visiting in the neighborhood of the Geysers, or hot

springs, in the western part of the island, but perhaps the most remarkable is one on the eastern coast near Hof. This *foss*, or waterfall, is surrounded by many lesser cataracts, which in another place would be viewed with the most lively interest, several of them falling more than 100 feet; but in the neighborhood of the more important one, which is represented in the engraving they sink into comparative insignificance.

In visiting Fossvöllum from Hof, the margins of several of these springs have to be traversed, and travellers find it necessary to proceed with the greatest caution. The whole track (road it can not be called, for it would be impossible for any wheeled-carriage to pass over it) by which the falls are approached from Hof, is dreary and mountainous, intersected by chasms at which the traveller shudders as he looks down the abyss, now winding around the side of a mountain, and then descending the abrupt declivity of a ravine, until it leads to within ear-shot of the sound of the falling waters. The troubled waters, dashing over a precipice of rugged rocks, both sides of which are lined with verdant meads—the gentle elevations which encircle the plains, the stately appearance of the farm, the extent and verdure of the *tún*, and the number of sheep, cows, and horses, that were feeding in every direction, produce altogether an effect the most lively and pleasing.

The waters roll sullenly forward along the plains until they arrive at an extended and precipitous break, where they shoot over in one sheet until within a short distance from the ground, when the waters are separated into thousands of sparkling streams and innumerable particles of spray flying about in all directions. The water then glides swiftly along the plains below, passing by the farm of Biörnson, which is of considerable extent. Few spectacles can be more magnificent than that which these falls present. It is worth the disagreeable journey, to behold the unbroken surface of the water shining like silver in the rays of the sun, until half way down it becomes expanded, and appears to be swallowed up in a cloud of snow, which the particles of spray closely resemble, and from which the stream below appears



Cataract at Fossvellum, Iceland

bursting, and apparently commencing a new existence as it ripples joyously over the pebbles beneath. But it is at night, when the moon is shining in the heavens with sufficient power to define the objects around, that the "Cataract of the Plains" is to be seen with the greatest advantage, and when it excites the most lively admiration. The indistinct mountainous tract, stretching away in the distance, the huge masses of rock that lie strewn around, and the buildings of the farm, seen as they are but imperfectly, afford greater play to the imagination, which, excited by the roaring of the cataract (the only thing which night renders more near and distinct), exerts its influence on the spectator, who stands as if under the spell of an enchanter, wrapped up in the contemplation of the scene.

Fossvöllum is situated on the northeastern coast of Iceland, in 30° north latitude, and between 14° and 15° west longitude. The farm of Björnson, which although at a distance from the falls, appears to lie almost under the cataract, is conducted with much skill.

THE HUMAN BODY



WE are fearfully and wonderfully made, may be said of our bodies, of our souls, of our minds, of the connexions between soul and body, and of the whole man. There may be far more wisdom and skill manifested to the spiritual world, in the formation of our souls, or the structure of our minds, than in our bodily frames. But this is concealed from our view. We can, indeed, see that there is something incomprehensible and overwhelming in the being and nature of our souls, and especially in the connexion between our spiritual and corporeal being. Yet the wisdom of the Creator is not, and was not intended to be, set forth in that evident and tangible manner in the creation of spirit, in which

it is exhibited to us in the structure of our bodies. Here we have something that may be seen with our eyes, and handled with our hands, and revolved and appreciated by our minds.

The human body presents to our view system after system, apparently complete within themselves, and independent of each other, yet all intimately connected and interwoven, so as to form one great complicated and incomprehensible system, a system of order, harmony, and regularity, to the intelligent observer, but to the unenlightened mind a mass of confusion. Take the naked skeleton of a man, and study the osteology of his frame, look at the bones of his cranium, his spine, his chest, his limbs, his hands, and his feet. Notice how strength is found where strength is needed; where delicacy, delicacy; where motion, joints and other requisites for moving. Observe the position, size, shape, and relations, of each bone. Consider their structure, their density, and strength, the solidity of some of their parts, the sponginess of others; mark their cavities, protuberances, and processes, and connect all these with their several uses and functions. We see great wisdom manifested in the arrangement of such a number and variety of parts, so as to harmonize with each other, and all tending to the same general purpose. Yet what brittle substances are human bones, and how very flimsy are many of them, and how easily may the whole system be driven to atoms. Truly we are fearfully made. But the wisdom and skill seen in the structure of the skeleton, is greatly augmented by considering its connexions with other systems. What is called the vascular system, may be mentioned as intimately connected with the skeleton. The vessels, in many instances, follow the course of the bones, and the bones are often fitted with grooves, notches, perforations, and cavities, suitable to transmit or contain the vessels. This vascular system is the link of connexion between the solids and the fluids, between the bones and the blood, lymph, chyle, and other liquids. The connexion of this system with the skeleton is most wonderful and surprising. By means of the action of fluids, the most solid and dense bones are

sometimes, in diseases, entirely removed, and in convalescence as completely restored; and so rapid is the action of these vessels, and so thoroughly do they penetrate the hardest bones, that the color of the bones may in some cases be changed, by a change of diet, even in two or three days. Yet the bones and vessels, and their connexions and relations, are but the beginning of the wonderful structure of the human frame. Were we to take a particular view of the muscles, and their connexions with the parts already considered, and particularly the skilful and surprising manner in which they act upon the bones, by means of sinews, and were we to examine the larger viscera of our frames, and their relations and functions, and then look for a moment on the glandular system, and learn the origin, course, and issues of all the secreted fluids, that are daily formed within us, we could then have some faint notion of the intricacies of the anatomy of man, and of the great wisdom requisite to design, and skill to form such a being. But having taken this view, it would be nothing more than an outline of the great machine. The minutiae must be considered before we can fully learn what is here to be learned of the wisdom of God. In the outline we have faintly marked, we have omitted the most wonderful, most intricate, and most interesting part. We have said nothing of the nervous system. Nothing of the connexion of this system with those already mentioned. The nerves are the seat of all sensation, feeling, sympathy, and affection, and the origin of all motion. Paralyze one set of our nerves, and our power over the muscles and limbs of one side is gone. Paralyze another set, and the muscles of the upper or lower extremities become useless—a third set being destroyed, and we are unable to speak—a fourth, and our reason is gone—a fifth, and the digestive organs are destroyed—a sixth, and we cease to breathe. Nerves are found dispersed over the whole surface of the skin, through every vessel, every organ, every muscle, all the viscera and glands of the body—yea, and in the very bones, and among the cartilages. In every part of our body we have either feeling or power of motion, or are sensible of

involuntary operations. The nerves, by old anatomists were considered as uniform in structure, and functions. But now it is known, that one part of the nerves is completely under the power of the will, and the rest entirely independent of it. They are also divided into nerves of motion, of sensation, of respiration, and sympathetic nerves. The attenuation of all these systems is surprising. We hear anatomists speak of nerves of nerves, of veins of veins, and arteries of arteries. And if it is necessary that all the large veins, arteries, and nerves, should be attended by nerves, veins, and arteries, of a smaller size, may we not suppose that these have others still smaller attending them, and that these last are attended by others still less, and so on *ad infinitum*.

But let us look at man as a spiritual being. How various are his faculties, his desires, his capacities. He is a social being, susceptible of the most tender affections. He is malignant, capable of cherishing the darkest and most diabolical designs, and most bitter animosities. He is active and energetic, bold and venturesome, daring to rise into the air, to dig into the earth, to encompass sea and land, and pry into the secret, and hunt out the unknown parts of the earth. He is frightened by neither the depth, breadth, or storms of the ocean, nor by the height or precipitancy of the most rugged mountains. The beasts of the forest, darkness, dangers, and horrors, are not to stop him. War, with all its train of terrors, is sought by him. Yet he is susceptible of meekness, patience, self-denial, kindness, gentleness, mildness. And he has mental faculties. He remembers things long past, he looks forward to things far ahead, and imagines things that never did or will exist or occur. He can deliberate and decide, or suspend his judgment. And his faculties are never dormant. His memory, his imagination, his judgment and will, are always with him. In an instant he is ready for action with any of his faculties. When we consider his mental faculties, we see that he is wonderfully made. But his duties, his responsibilities, his obligations, his dangers, trials, and temptations, all tell him that he is fearfully made. Every breath he breathes, ev-

every sense he feels, every sensation, and operation of his body or mind, ought to teach him that he is fearfully made. But the good providence of God preserves us every moment. In him we have help for every infirmity, and defence against every danger. "For He knoweth our frame, He remembereth that we are dust." "Remember I beseech Thee, that thou hast made me as the clay, and wilt Thou bring me into dust again?"

PROSPECTIVE GLORY OF THE UNITED STATES.

THE prospective glory of the United States is a subject which overwhelms the imagination. No citizens of ancient or modern times ever had such a country to contemplate as those of the United States. So vast, so fruitful, possessing every climate, from the cold of the north, to the balmy airs of the tropics; every plant, from the great pine of the Aroostook, to the delicate jessamine of the Rio del Norte. Within our boundaries are the foundation of untold wealth, our mountains are filled with the riches of every mine, our valleys invite the hand of cultivation, and smile, as none other, on the labors of the husbandman. The troubled waves of the Atlantic, and the stiller waters of the Pacific, lave our coasts; our ships whiten the ocean, and the loved flag that waves over them, is the harbinger of liberty, and the protection of the powerful and brave. In examining our geographical limits, we find within it, the extent of ancient and modern empires still left in wilderness, yet by the enterprise of our citizens, the additions of new states almost realize the prophecy of "a nation being born in a day." The ultimate history of our country seems too vast for human conception. The experiment of millions of men living under a republican government, and left to the fruition of the unfettered body and free mind, joined together in advancing the interests of humanity, and accomplishing the highest perfection our nature is capable of, who can conceive the result?

The United States have a frontier of over 10,000 miles, a seacoast of nearly

4,000 miles, and a lake coast of 1,200 miles. One of its rivers is twice as long as the Danube, the largest river in Europe. The Ohio river is 600 miles longer than the Rhine, and the noble river of the Hudson has a navigation in the "Empire state" one hundred and twenty miles longer than the Thames. Within Louisiana are bayous and creeks, that are almost unknown, that would shame by comparison the Tiber or Seine. The state of Virginia alone is one third larger than England. The state of Ohio contains 8,000 square miles more than Scotland. The harbor of New York receives the vessels that navigate rivers, canals, and lakes, to the extent of 3,000 miles, the distance from America to Europe. From the capital of Maine to the "Crescent city," is 200 miles further than from London to Constantinople, a route that would cross England, Belgium, a part of Prussia, Germany, Austria, and Turkey. The increase of population has been rapid beyond precedence, and in accordance with the country itself. At the close of the revolution, the United States contained a population not twice as large as the present city of London; in less than fifty years, it has increased into seventeen millions, and this population the amalgamation of the finest European races, "forming a national character having for its basis the irresistible energy and steady courage of the Anglo-Saxon, in which are mingled the religious tenacity of the thrifty Scot, the generous bravery of the quick-witted Irishman, the sanguine and elastic spirit of the mercurial Frenchman, and the patient, persevering industry of the honest German."

Yet all this has been accomplished within the ordinary lifetime of an individual. There are those in our land that were present at the birth of the nation, and have witnessed its wonderful growth. The future—pressed on by the accumulated energies of the last fifty years—will develop results in arithmetical progression, more wonderful; and as the imagination attempts to draw a picture of the future, the mind shrinks from the conception, and the judgment and fancy are destroyed, in the presentation of the not half-conceived reality.

BE INDUSTRIOUS.



HERE is no situation in life, which affords so much comfort and enjoyment as that of having body and mind constantly employed. Although there appears to be in the minds of most people a natural antipathy to labor, yet it is well known, and generally admitted by those whose circumstances have at times required incessant labor, and at other times perfect leisure and exemption from care, that there is vastly more enjoyment in industry than in idleness. It is the plain and express duty of every person to be industrious, and to improve every hour of their time, in the full exercise of their natural strength and faculties, in the most useful employment. No circumstances in life can furnish an excuse for a neglect of this duty. We would not, in these remarks, wholly proscribe recreation; but a well-balanced mind will find the most healthy and pleasant recreation in exercises which are decidedly useful and beneficial to themselves and others. For example: a boy takes pleasure in the exercise of hauling a little cart loaded with earth or stones, though there be no advantage in the removal of those articles; but does he find any less pleasure, under a consciousness of doing good, when removing the same materials from a place where they were an encumbrance, to another place where they are wanted? Certainly not. Or if a miss finds pleasure in walking in the fields, that pleasure is rather enhanced than otherwise, if she can accomplish something useful by the walking.

It is a common thing for men, during their labor, to derive an enjoyment from the anticipation of the pecuniary compensation which they are to receive therefor, but this kind of enjoyment is far inferior to that of one who rejoices, during his labor, in the consciousness of performing a duty, and a sense of divine approbation. The scriptures of divine truth, which alone furnish perfect laws and rules of duty, and guide to happiness, contain many injunctions to industry and diligence in business; and

that for the purpose, not of acquiring wealth, but of doing good. The word "avarice," is not to be understood to imply a desire of earning or gaining, but of retaining or hoarding what has been acquired of wealth. But our subject is the duty of industry and diligence. If any man entertains and cherishes the true principle of sympathy and benevolence, deriving more pleasure in relieving the sufferings of his fellow-mortals, than in the possession of such articles of wealth as are not utterly indispensable, there will be no danger of his being either idle or miserly. But the neglect of improvement of an hour of time is as decidedly a crime, as the wasting of money or property; and the neglect of doing good to others when opportunity occurs, is decidedly incompatible with the character or hope of a true Christian, for "he that knoweth to do good and doeth it not, to him it is sin."

HOPE.

HOPE is the connecting link between the past and the future. It is a constant prophet, save that it always dresses out events to come in a gaudy hue, which fades and blackens when the wheels of time bring us to the consummation. Were it not for this earnest of the future, this principle implanted in the breast of man, he would have nothing for which to live, nothing to induce him to drag out a miserable existence. Never is hope so wild and imaginative, and we may say, so deceitful as in youth; never so sober, so true, so stable, as in age.

Although hope is often delusive, yet, in the greatest misery, the least flickering ray of sunshine peering into the caverns of the heart, revives the drooping soul, and excites action, as when some precious gem, under the sun's beam, flashes its radiance round the darkened cell and springs into multiplied existence.

Hope is an eternal principle. Though in the last strait, man never ceases to hope; when the spark of life departs, it flies heavenward, and is rekindled upon the altar of eternity!

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Portrait of Alexander enlarged from a Coin.

ALEXANDER.



F kings and war-
 riors, no one has
 acted so eminent a
 part on the mighty
 stage of the world
 as Alexander, com-
 monly called the
 Great, third king
 of Macedonia of that name. Cæsar, the
 other great conqueror of antiquity, the
 equal probably of Alexander in ability, and
 his rival in renown, had far less influence
 on the destinies of mankind; for the un-

wieldy commonwealth of Rome before his
 time was tending fast toward a despotism,
 and it remained only to be seen whether
 that despotism should be committed to
 Pompey or to him—to the representative
 of the aristocratic, or the favorite of the
 democratic party. The life of Alexander,
 on the contrary, was one of those critical
 epochs which have changed the history of
 the civilized world. It was foretold in
 prophecy as one of the appointed means
 of working out the decrees of the Al-
 mighty; it cast down the mighty empires
 of the earth, it substituted new dynasties,
 new manners, and a new language over

the richest part of the known world. It forms a turning point, a link of sacred and profane history, and as such possesses a great and lasting interest, independent of that seductive glory which waits upon brilliant qualities and wonderful actions set off by success.

The Macedonians, of whom Alexander was the hereditary king, had in the more brilliant times of Greece been regarded as little better than barbarians, unworthy of being ranked with the polished citizens of the Greek republics, though the kings of Macedonia were of Argive origin, and traced their descent from the honored line of Hercules. Philip, the father of Alexander, was the first of them who rendered his power formidable to his southern neighbors. He was a brave, able, and ambitious prince, successful equally in negotiation and war. He died B. C. 336.

Alexander was born at Pella, B. C. 356. As by his father he claimed descent from Hercules, so by his mother Olympias, of the royal house of Epirus, he traced his line to Achilles. His education was conducted with care and judgment, and he grew up robust and active, skilled in military exercises and the use of arms. In running and riding he was pre-eminent; and one of the most celebrated actions of his youth was the taming of a magnificent Thessalian horse, which had been offered for sale to his father, but refused, as being so fierce that no one could ride it. This was the celebrated Bucephalus, who, after carrying Alexander through his Persian campaigns, died in the battle against Porus, on the banks of the Hydaspes, leaving his name and fame (like the no less celebrated Rozinante) as an inheritance for all of his respectable species. Alexander's mind was not less carefully cultivated than his body. At the age of fifteen he was placed under the immediate superintendence of Aristotle, who continued near his person until he set out on the invasion of Persia. It is conjectured that the philosopher composed for his use the valuable treatises still extant, on logic, poetry, &c.; and there is a letter extant in which he upbraids his tutor "for publishing those branches of science hitherto not to be acquired except from oral instruction. In what shall I excel others, if the more pro-

found knowledge I gained from you be communicated to all?" The passage may serve in some respects as a key both to the good and evil of Alexander's temper. Ardent in the pursuit of excellence, his motive and object seems rather to have been the desire to excel others, rather than excellence in the abstract, and for its own sake; as in the very instance now under review, in which knowledge was avowedly sought and esteemed for selfish purposes. How great his progress in abstract science may have been, we have no means to determine; that his talents were carefully improved is evident. His style in speaking and writing was clear and pure, his capacity was suited no less to civil than to military business, above all, he had that talent for command, that ascendancy over the minds of others, which seems a part of the natural constitution of those who enjoy it, unattainable, though improvable, by study. To judge from the results, his moral must have been inferior to his intellectual training: he was rash, headstrong, hot-tempered, and selfish, as all must be who can not bear even an equal, and with whom, therefore, self-aggrandizement is the first object of life. That Aristotle, master as he was of moral philosophy, had not taught his pupil the art of self-government, is evident from the anecdotes of Alexander's youth, as well as from the excesses of his maturity. But we must not forget that the gifts of nature and of fortune combined in this instance to enhance the difficulty of inculcating or of practising self-control.

Such as we have endeavored to describe him, at the age of twenty, Alexander came to the throne. The suddenness of Philip's death, and the youth of his successor, gave to all those who had borne with anger and impatience the rapid increase of Macedonian power, a favorable opportunity, as it then seemed, of emancipation. Dangers and rebellions surrounded Alexander on all sides, but decision and promptitude saved him. He marched an army at once into Thessaly, and having by his unexpected presence nipped in the bud the plots of the discontented party, he proceeded to Thermopylæ, where the Amphictyonic counsel recognised him, in place of his father, captain-general of

Greece. This decree was confirmed by a general assembly at Corinth; at which he was empowered to follow out his father's designs, by taking command of the whole Greek nation in prosecuting the war against Persia. The Lacedæmonians alone dissented, saying that it had ever been their privilege to lead, and not to follow. It was on this occasion that the celebrated interview between Alexander and Diogenes took place, when the surly philosopher requested, as the only favor which he needed, that the king would move from between him and the sun.

In the spring of 335 B. C., he undertook an expedition against the northern barbarians, and forced his way to the banks of the Danube. Having re-established in that quarter the terror of the Macedonian name, he concluded peace with the Triballi and Getæ, and turned westward against the Illyrians and Taulantii, warlike nations dwelling on the coast of the Adriatic. While he was thus engaged a report of his death became current in Greece, and emboldened the Thebans to attempt the recovery of their independence. On receiving this intelligence Alexander returned southward by forced marches, and arrived at Thebes before the rumor of his death had been even contradicted. He took the city by storm, levelling most of the buildings with the ground, a blow from which Thebes never recovered.

The Athenians had been active in stirring up discontent against Alexander; and having been of counsel with the Thebans, had cause to apprehend a similar fate. But Alexander received their excuses, and, returning to Macedonia, employed the winter in preparation for the grand design of conquering Persia. In the spring, B. C. 334, he commenced his march.

The force with which he undertook to overthrow the greatest empire of the world, in wealth and extent, is computed at 30,000 infantry, and 4,500 cavalry. Of the former, 12,000 were Macedonians, 12,000 Greeks; the rest were Thracians, and of other northern tribes, forming an excellent body of light-armed troops. The cavalry was chiefly composed of Macedonians and Thessalians. The Hellespont was crossed at Sestos, and a landing effected in Asia without opposition. After several engage-

ments in which he was victorious, he met Darius in person, waiting to defend his crown. Battle was joined about 30 miles north of Antioch, in the plain of Issus, between the sea and the mountains of Amanus. The numbers of the Persians were vast, greater probably than had been collected since the armament of Xerxes; and of those near 150,000 including 30,000 Greeks, were disciplined, and ought to have been effective troops. The Greeks, in the centre of the field, well played their part, and resisted successfully the formidable assault of the phalanx, as the close and deep array of Macedonian infantry, armed with long pikes, was called. But the success of the Macedonian cavalry of the right wing, where Alexander, opposed to Darius, commanded in person, was decisive. Darius quitted the field; and, as usual in an eastern army, the flight of the sovereign was the signal of dispersion. The victory was complete. He then proceeded to Tyre, which after seven months siege was taken by storm. After conquering Palestine, he went to Egypt, where he laid the foundation of the city of Alexandria.

Darius having collected a second army while Alexander was in Egypt, he returned and met him near Gaugamela. The scene of action was an extensive plain, bounded on the east and west by the meeting streams of the Lycus and Tigris, and to the north by the Gordyæan mountains. Darius had chosen this as his battle-field; and had carefully levelled it, to give the best advantage to his war-chariots and cavalry. His enormous force is calculated by the Greek historians at a million of infantry, 40,000 cavalry, 200 chariots, and 15 elephants; a force so infinitely superior in number to the Greek, that even if we strike off one half of the numbers, it derogates little from the honor of the victors. The victory was decisive. Darius fled toward Ecbatana, while Alexander proceeded to gather the spoils from the wealthy cities of Assyria and Persia. Here he remained sometime, receiving the homage of or subduing the various portions of the empire.

In the autumn of 327 B. C. he commenced his march to India. His route lay at no great distance from the southern foot of

the Paropamisus, the western portion of the great Himalayan range, through warlike tribes, with whom he had several sharp though obscure battles, and was twice wounded before he reached the Indus. Our limits will not allow us to follow him through all his campaigns in India.

On his return Alexander found disorders to be corrected and delinquents to be punished; for the satraps, as usual, when the supreme authority is far distant, had presumed upon the chances of impunity, to indulge in corruption and oppression. It is to be mentioned to the king's honor, that he never turned a deaf ear to the complaints of the commonalty, or suffered such misconduct on the part of governors to pass unnoticed.

At Babylon, Alexander proposed to fix the capital of his empire. His active mind was now teeming with plans of another kind than those of conquest, for they tended to develop the resources and increase the wealth and happiness of his realms. He ordered ships to be built on the Caspian sea, to explore those desert waters which in the utter ignorance of geographers were then believed to communicate with the Indian ocean. He commenced a dock at Babylon large enough to contain one thousand ships of war, and sought in all quarters the best seamen of the Mediterranean, in hopes of rendering his metropolis the emporium of eastern commerce, and a rival of what Tyre had once been. He bestowed much care in organizing and disciplining a new force composed of natives of the east, officered by Macedonians, analogous to the East India company's native troops. He meditated a new expedition for the conquest of Arabia by land and sea, intending to circumnavigate that peninsula from the mouth of the Euphrates to the gulf of Suez. And one of the most beneficial, and perhaps not the least costly and difficult, of his undertakings, was to restore the dikes and canals, by which, in the palmy days of Assyria, the flow of the great rivers had been so regulated as to convert that tract, naturally barren, into the most fertile country of the known world.

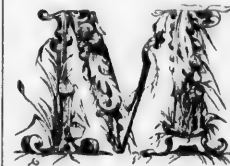
While engaged in these manifold proj-

ects, Alexander was seized by a sudden illness. Rumors of poisoning, as is common when great men die suddenly, were spread abroad; but these have neither probability nor evidence to confirm them. According to the best accounts, he died of fever, caught most likely in superintending the works which we have just mentioned, in the swampy plains of Babylon, and aggravated by imprudent conviviality. A diary of his illness, the first series of royal bulletins extant, is preserved in Arrian. He died on the eleventh or twelfth day, about midsummer, B. C. 323. His body was carried to Alexandria; and a beautiful sarcophagus brought thence, now in the British Museum, has been honored with the title of his tomb.

He left no distinct declaration of his wishes as to a successor, and no born child, but his wife Roxana was pregnant at his decease. It is said, that being asked to whom he bequeathed his empire, he replied, "To the strongest;" and that he foresaw a bloody competition at his funeral games. The prophecy was so obvious, that we may readily suppose it genuine, and it was amply fulfilled.

BIRDS OF PARADISE.

1. *Paradisæa apoda*. The Emerald.
2. *Paradisæa aurea*. The Sillet.
3. The Incomparable; (Le Vaillant).
4. The Cloudy; (Le Vaillant).
5. *Paradisæa superba*. The Superb.



ANY of the narratives of the older naturalists are little more than amusing fables. To deduce the leading characteristics of an animal from a minute investigation of its physical construction—to watch its habits with anxious solicitude in its native haunts—formed no part of the care of those who compiled books of natural history a century or two ago. Whatever

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was imperfectly known was immediately made the subject of a tale of wonder. The old accounts of the birds of paradise are striking examples of this disposition to substitute invention for reality. Now and then some traveller brought to Europe the skin of a beautiful race of birds, of whose habits he knew nothing, except what he learnt from the natives who collected them. Their plumage was of the most brilliant lustre; some were covered over the breast and back with tippets of the richest hues; others had long delicate lines of feathers, prolonged from beneath their wings, or branching from the head; and most of these trappings appeared too fragile for any use, and incapable of bearing up against the rude winds which visit the earth. The specimens were also deprived of feet. Fancy had thus ample materials to work upon. These birds, tender as the dove, and more brilliant than the peacock, were described as the inhabitants of some region where all was beauty and purity, where no storms ever ruffled their plumage, where they floated about on never-tiring wings in a bright and balmy atmosphere; incapable of resting from their happy flight, and nourished only by the dews and perfumes of a cloudless sky. They were called *birds of paradise*: and the few specimens that Europeans saw were supposed to have accidentally visited some sunny spot of our world, rich with flowers and spices, but not their true abiding-place. Such were the tales that the old writers of natural history adopted; and to which even scientific persons appeared to give belief, when they named one of the species *paradisea apoda*, the *feetless bird of paradise*.

The most correct description of the birds of paradise is that given by Gaimard, one of the naturalists who accompanied the French expedition of discovery under Captain Freycinet, in 1817. He observed many of these birds in the island of Vaiou, one of the islands forming the group of which New Guinea is the principal. They constitute a genus of the order of *Omnivores* (eating all things). Their principal food is fruit and insects, and the strength of their beaks and feet admirably fit them for sustaining themselves in the thick woods where they dwell. They

delight in the most inaccessible parts of forests, and when the weather is serene, they perch themselves on the topmost branches of the highest trees. They fly with great rapidity, although they constantly direct their course against the wind. This is a proceeding which they are compelled to adopt, in consequence of the luxurious trappings with which nature has clothed them; for the wind pressing in the direction of their long feathers, holds them close to their bodies: in a contrary direction their plumage would be ruffled, and their loaded wings would act with difficulty. They, however, seldom venture from their retreats in rough weather. At the approach of a storm they entirely disappear, instinctively dreading the hurricane, which they would be unable to meet, and before which it would be equally dangerous to fly. They are extremely courageous, ready to attack any bird of prey that excites their alarm. They have never been seen in a state of domesticity among any of the Papou tribes, inhabiting the islands where they are commonly found. Of their nests, their mode of hatching, and their care of their young, nothing appears to be known.

In the annexed engraving we have grouped together some of the more splendid of the birds of paradise, as given by Le Vaillant, in his work on birds. The species No. 1 (*par. apoda*), is very remarkable for the beauty of its plumage, which is of the most varied and brilliant colors. It is especially distinguished by the long curved fillets which spring from beneath its wings, and extend in length about two feet. No. 2 (*le sifilet*), is so called from the six fillets which adorn its head. Nos. 3 and 4 are drawn and described by Le Vaillant. The latter is represented displaying its splendid plumes as the peacock does his tail. No. 5 (the superb) exhibits pretty clearly the nature of the plumage of the birds of paradise. The sort of tippet upon its breast, and the fan-like ornaments of its shoulders, have no connexion with either the wings or the tail. The bird has the power of raising or depressing them; but they do not appear to assist its flight. Those on the shoulders fold down over a part of the wings like a mantle. In dimensions the

various species differ considerably. The bodies of most are not larger than that of a thrush, although the thickness of their plumage makes them appear the size of a large pigeon.

One of the most beautiful of the birds of paradise is called the king-bird (*paradisæa regia*). Of this species many curious stories are current in the islands where these birds are found. The natives aver, for example, that the two principal species of paradise birds have each their leader, whose imperial mandates are received with submissive obedience by a numerous train of subjects; and that his majesty always flies above the flock to issue his orders for inspecting and tasting the springs of water where they may drink with safety—the Indians being in the practice of taking whole flocks of birds by poisoning the water where they resort to drink. Le Vaillant considers that this notion originated from the casual observation of a strange species among a gregarious flock. This explanation accords with the account given by M. Sonnerat of the manners of the king-bird of paradise; for being a solitary bird, going from bush to bush in search of the berries upon which it feeds, it may occasionally be seen near the flocks of those which are gregarious, where its singular plumage must render it conspicuous.

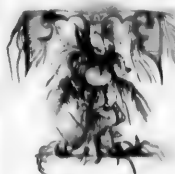
These gorgeous trappings of the various species of the birds of paradise excite the cupidity of man. The feathered skins form a large object of commerce between the people of the New Guinea islands and the Malays.

The natives entrap the birds or shoot them with blunt arrows. They prepare the skins with considerable nicety, having removed the true wings, which are not so brilliant as the other feathers, and cut off the feet and legs. The absence of feet in all the specimens brought to Europe, gave rise to the fable that the birds of paradise had no power of alighting, and were always on the wing. Their migratory habits may probably also have given some color to this tale. At the nutmeg season they come in flights from the southern isles to India; and Tavernier says, "The strength of the nutmeg so intoxicates them that they fall dead drunk to the earth."

SABBATH THOUGHTS.

MANY and thrilling are the associations which the weekly recurrence of the sabbath brings. The sun of a sabbath morn first shed light on a finished creation. When the ball we tread on stood out a complete and lovely thing before its Maker; when Eden bloomed a little heaven below, and man, with his pure and lofty spirit, lived in its bowers; ere yet the trail of the serpent was over all, "God blessed the seventh day and sanctified it." The beams of a sabbath morning first shed light on a ransomed creation. Then it was that the Captain of our salvation, having battled with Death in his own dark domain shivered his fetters, rose a victor from the tomb, led captivity captive, and gave gifts unto men; so that now, instead of the wo and shame sin had entailed upon the fallen, there is proffered to them the beauty, the brightness of a purchased immortality. The sabbath is a type, and tells of that rest which remaineth to the people of God—of that hour when the Christian pilgrim shall terminate his long and toilsome march through the wilderness, and cross the threshold of his Father's home—when the Christian mariner shall heave over the last ocean billow, and enter the desired haven—when the soldier of the cross shall lay off his panoply, wear the rich robe and the bright crown. Independently, too, of these grander associations, there is much—much of piety, much of poetry—to make the sabbath-day to a Christian's soul the very "best of all the seven." The image of a gray-haired sire, the family shrine, the domestic Sunday-school, the "big ha' bible, once his father's pride," the music of the church-bell, the house girt round with the graves of his kindred, devotion's lofty peal—Oh! it can not be that the man is on his way to heaven who loves not as his life this atom of heaven dropped on earth—it can not be that he is of the "peculiar people," who calls not the "sabbath a delight, the holy of the Lord, honorable"—that he has any claim to the character of a religious being, who allows its golden hours to glide away without some thoughts about that inheritance to which it points!

PROTECTION FROM LIGHTNING.



THE apprehension of danger from lightning, and the solicitude to discover and adopt means of security against it, are proportionate to the magnitude of the evils it produces rather than the frequency of their occurrences. The chances which any individual of the population of a large city incurs of being struck during a storm are infinitely less than those which he encounters in his daily walks of being destroyed by the casual fall of the buildings near which he passes, or by the encounter of carriages crossing his path, or from the burning of the house in which he lodges, or from a thousand other causes of danger to which he exposes himself without apprehension. Still, even those who possess the greatest animal courage are struck with awe, and affected more or less by fear, when exposed to the war of the elements in a violent storm; and there are none who, in such cases, will not willingly avail themselves of any means of protection which they believe to be availing. Augustus entertained such a dread of lightning that in storms he took refuge in caves, thinking that lightning never penetrates to any considerable depth in the ground.

Strong fear, operating on ignorance, has prompted, in times past and present, a multitude of absurd and unavailing expedients, among which, nevertheless, chance seems to have flung some in which analogies to the results of modern science are apparent. When a cloud menaced thunder, the Thracians shot their arrows at it. The arrows being metal, were conductors, and, being pointed, had the virtue of attracting lightning. Pliny states that the Etruscans had a secret method by which they could draw lightning from the clouds, and guide it at their pleasure. Numa possessed the method, and Tullus Hostilius, committing some oversight in the performance of the ceremony, was himself struck. For Numa substitute Franklin, and for Tullus, Richman, and the Roman legend is converted into a true historical record of the last century.

It was formerly believed that persons in bed were never struck by lightning; and a modern meteorologist, Mr. Howard, apparently favors such an idea, by relating two cases in 1828, in which beds were completely destroyed by lightning, while the persons who lay in them were uninjured. Against this, however, many contrary instances may be cited. On the 29th of September, 1779, Mr. Hearthy was killed in his bed, by lightning, at Harrowgate, while his wife, who lay beside him, escaped. On the 27th September, 1819, a servant was killed in her bed at Confolens, in France. In 1837, a house was struck with lightning at Kensington, near London, where a man and his wife were killed in their bed.

The Romans believed that seal's skin was a preservative against lightning; and tents were made of this material for timid persons to shelter under in storms. Augustus was always provided with a seal's skin cloak. However ineffectual may be such an expedient, experience abundantly proves that the material of the dress is not without considerable influence on the course which lightning follows, and may, therefore, augment or diminish the peril of the wearers. When lightning struck the church at Château-neuf-les-Moutiers, during the celebration of mass, of the three priests who officiated at the altar, two were struck dead, and the third was uninjured. The vestments of the last were of silk.

There are some well-attested facts which indicate a relation between color and the movements of the electric fluid. three cases are cited in which horses and oxen having white spots were struck by lightning, and had all the white hair burned off, while the remainder of the hide remained unaltered.

It had been supposed that certain species of trees are proof against lightning, and never struck by it. Tiberius was accustomed to wear a crown of laurel, from the idea that lightning never struck it.

The beech-tree is said to be a non-conductor of lightning. So notorious is the fact, that the Indians, whenever the sky wears the appearance of a thunder-storm, leave their pursuits and take refuge under the nearest beech-tree. In Tennessee

the people consider it a complete protection. Dr. Becton, in a letter to Dr. Mitchell, states that the beech-tree is never known to be struck by atmospheric electricity, while other trees are often shattered into splinters. May not a knowledge of this afford protection to many when exposed?

When assailed by a storm in an open plain, the danger is greatly augmented by seeking the shelter of a tree. Experience and theory combine to prove this. The position of greatest safety is such a distance from the tree that it shall act as a conductor, diverting the lightning from the place assumed for safety. A distance of half a dozen yards may serve for this purpose.

Glass, being a non-conductor of electricity, is generally supposed to have a protective virtue. Thus it has been presumed that a person enclosed in a cage of glass exposed to a thunder-storm, would be in absolute safety. This is proved to be a fallacy by many examples of lightning striking and penetrating the panes of windows and the frames of conservatories.

Nothing is more clearly established than that pieces of metal of any kind, carried about the person, augment the danger of being struck by lightning; and this increase of peril is greater in proportion to the magnitude of the metallic appendages. That this material principle, illustrating as it does, one of the elementary laws of electricity, may be appreciated as fully as it ought to be, we shall here cite some of the numerous recorded examples of it.

On the 21st of July, 1819, lightning struck the prison of Biberac, in Swabia, and, passing into the grand hall, struck an individual prisoner who was one in a group of twenty; the nineteen others were untouched. This individual was a brigand chief, who, being under sentence, was chained round the waist.

When Saussure and his party were at Breven, in 1767, the metal band and gold button on the hat of M. Jallabat emitted sparks.

Constantini relates, that in 1749, a lady wearing on her arm a gold bracelet, raised her hand to shut the window during a thunder-storm, the bracelet suddenly dis-

appeared, not the slightest trace of it remained. The lady was slightly wounded. Brydone relates that a lady of his acquaintance, Mrs. Douglass, sitting at an open window, during a storm, had her bonnet completely destroyed, but suffered no injury in her person. He accounts for the wire of the form of the bonnet attracting the lightning.

These, and many other instances might be mentioned, sufficiently proving that safety is best consulted in time of storm, by laying aside all metallic appendages of the person, such as chains, watches, earrings, hair ornaments, &c. The source of the greatest danger is in the bars or plates of steel which are used in the corsets of females, and which ought to be abandoned by all ladies who do not desire to invite the approach of lightning.

It has been already shown that when lightning passes along a line of conducting matter, the only points where explosion takes place and damage ensues, are at the parts where lightning enters and leaves the conductor; and as a necessary consequence of this, all interruption of continuity in any part of a conductor or series of conductors is attended with explosion and corresponding damage. Since, then, the bodies of men and animals afford a free passage to the electric fluid, it may be expected by analogy, that when lightning is transmitted through a chain of animals, either in mutual contact, or connected by conductors, the chief if not the only injury would be sustained by the first and last individuals of the series. This principle is accordingly supported by the results of experience. The following instances will illustrate it:—

On the 2d of August, 1785, a stable at Rambouillet was struck by lightning. A file of thirty-two horses received the fluid: of these, the first was laid stiff dead, and the last was severely wounded. The intermediate thirty were only thrown down.

On the 22d of August, 1808, lightning struck a schoolroom in Knouan, in Switzerland. Five children read together on the same bench: the first and last were struck dead, the other three only sustained a shock.

At Flavigny (Cote d'Or), the lightning struck a chain of five horses, killing the

first two and the last two, the middle horse suffering nothing. At a village in Franche-Comté, lightning struck a chain of five horses, killing the first and last only. At Praille, near Chartres, a miller walked between a horse and a mule loaded with grain: lightning struck them, killing the horse and mule. The man was unhurt, except that his hat was burnt and his hair singed.

The danger from lightning during storms may be lessened, by observing some precautions suggested by the known properties of the electric fluids. Chimneys often afford an entrance to lightning, the soot which lines them being a conductor. Keep, therefore, at a distance from them. Avoid the neighborhood of all pieces of metal, gilt objects, such as the frames of glasses, pictures, and chandeliers. Mirrors, being silvered on the back, augment the danger. Avoid the proximity of bell-wires. The middle of a large room in which no chandelier is suspended, is the safest position, and is rendered still more so by standing on a plate of glass, or a cake of resin or pitch, or sitting on a chair suspended by silken cords.

The danger of being struck with lightning is augmented by being placed in a crowd of persons. The living body being a conductor of electricity, a connected mass of such bodies is more likely to be stricken, for the same reason that a large mass of metal is more liable than a small one.

CASTLE HOWARD.



THE superb mansion of Castle Howard, is situated in a noble park about six miles west of Malton, in Yorkshire. The exterior of the edifice, as a whole, is grand and imposing, though not free from the charge of want of unity in its parts. The design for the buildings was made by Sir John Vanbrugh, the eminent architect of Blenheim; but one of the wings was built

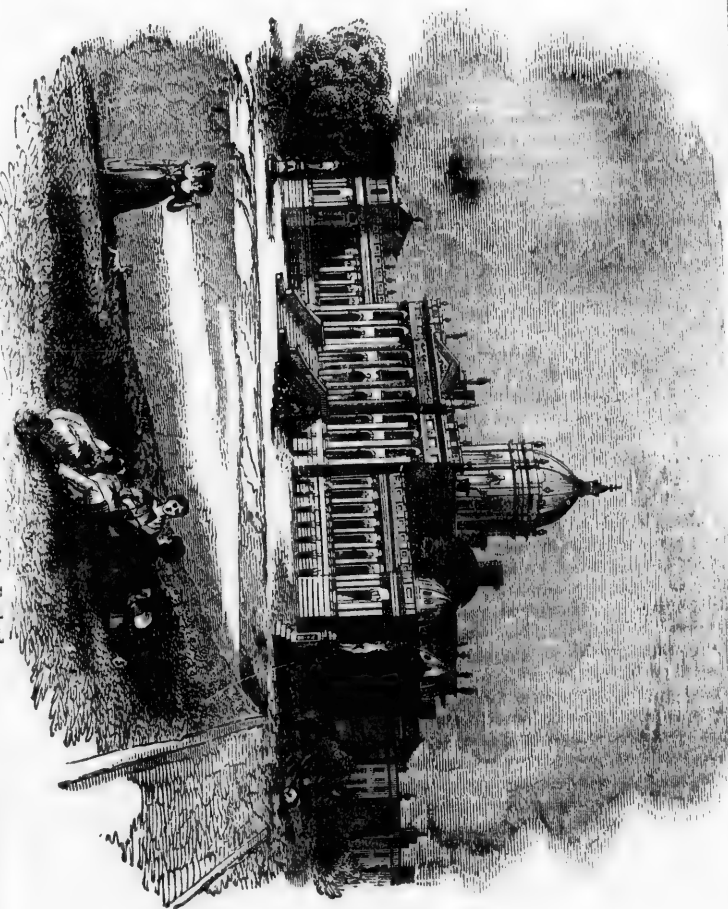
much more recently by Sir James Robinson, and to him is owing the alleged incongruity. The front is very long, and the whole pile, with its cupolas, its roofs, and its massy clustered chimneys, is stupendous. The approach is through an ancient gateway flanked with appropriate towers. The site of the present mansion was formerly occupied by the old castle of Hinderkelf, which was destroyed by an accidental fire. Castle Howard, its successor, was erected by the third earl of Carlisle, as he has himself informed us in some verses, amiable in sentiment, but not remarkable for spirit or elegance. The north front consists of an elaborate centre of the Corinthian order, with a cupola rising over the top, and on either side extensive wings, the east according to the original design, the west from Sir James Robinson's. The south or garden front is also very magnificent. Its centre, consisting of a pediment and entablature supported by fluted Corinthian pilasters, is approached by a grand flight of steps, and the view from these of the whole front is strikingly noble. At the extremity of the east wing is the kitchen with square towers at the angles. Before the south front a beautiful turf terrace, decorated with statues, extends away from the house for the space of half a mile, where it terminates in an Ionic temple with four porticoes, and a beautiful interior. The cornices of the door-cases are supported by Ionic columns of black and yellow marble; and in the corners of the room are pilasters of the same beautiful material. In niches over the door are various ancient busts. The floor is disposed in compartments of antique marble of various colors, and the whole crowned with a richly gilded dome.

The interior of the castle fulfils all that the imagination, warmed by the outward grandeur, can expect or desire. The lofty and richly decorated rooms are everywhere teeming with objects of curiosity and vertu, and with the works and masterpieces of human skill, pictures, statues, and busts. To give our readers an adequate idea of the amazing riches scattered about in the greatest profusion, and attracting the eye in every apartment of the building is impossible. The pictures, for

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South Front of Castle Howard, Yorkshire, England.



instance, are too numerous to allow us even to mention their names, although they are almost inestimable in value, as they are almost countless in number. Among them are works by almost every great master. There are three paintings in particular, which formed a portion of the celebrated Orleans gallery, and which found their way to England during the troubles of the French revolution. One is the "Finding of Moses," a fine specimen of the characteristic genius of the Spanish painter Don Diego Velasquez; another is the "Entombing of Christ," by Ludovico Carracci, a painting of extraordinary pathos, grandeur, and sublimity. But the most valuable of the three, and not only of the three, but of the whole collection, is the "Three Marys," by Annibal Carracci.

The hall of the mansion, measuring thirty-five feet square, and sixty in height, is surmounted by a dome with Corinthian columns, the top of which is one hundred feet from the floor: it is very handsome and noble. On the walls are representations, by Pellegrini, of the history of Phaëton, with the four seasons, the twelve signs, &c. In recesses are statues of Augustus, Marcus Aurelius, and other works of ancient sculpture. There are also many antique busts on pedestals. In the saloon, a noble room, are many more statues and busts, with a number of pictures. The ceiling is embellished with a representation of Aurora. The chimney-piece of the dining-room is unusually superb. The cornice of white and Sienna marbles, with groups of polished white in the centre, is supported by fluted columns of Sienna marble. Upon it are three fine bronzes. This room also contains two beautiful slabs of Sicilian jasper, and a valuable urn or vase of green porphyry, with many busts and pictures. In the breakfast-room are two elegant tables of verd antique, with various bronzes and pictures; and in a dressing-room are two curious cabinets of precious stones.

The antique gallery, measuring 160 feet by 20, among many other curiosities, contains various rare and beautiful slabs, and a small antique statue, found in Severus's wall, gilt and inlaid. The walls of the drawing-room are richly decorated with

tapestry, from designs by Rubens. In the same apartment are two pedestals of green porphyry, on one of which is a sylvan deity. The museum contains a great assemblage of interesting objects: among these are thirteen urns, wherein were formerly deposited the ashes of ancient heroes, an ancient mask, many busts, vases, &c. In the southwest corner is an object to gladden the heart of every antiquarian, of every scholar, and of every man of taste; we allude to a small cylindrical altar, about four feet and a half high, which is supposed to have stood in the temple of Apollo at Delphi, according to the site ascribed to it by Chandler.

In the centre of four avenues of stately trees in the park, stands an obelisk, one hundred feet in height, bearing on one side inscriptions in Latin and English, commemorative of the valor and successes of the Duke of Marlborough; on the other, the verses we have before alluded to, recording that the plantations around, and the magnificent edifice they enclose, owe their existence to the third earl. The date on the pillar is 1712. The park and grounds are very extensive, and arranged on a scale of grandeur commensurate with the importance of the mansion and the family to which they belong, and the eye is everywhere delighted with the intermixture of lake, lawn, and forest. A splendid mausoleum stands about half a mile from the house. It is a circular building fifty feet in diameter, with a lofty dome, surmounted by a colonnade of twenty-five pillars of the Roman Doric order, the whole standing upon an elevated basement, which is reached by two flights of steps. The inside is very handsome: the cornice from which the dome rises is supported by eight columns, each standing on its pedestal; the dome is entirely of masonry, wrought in elegant compartments, and the pavement, corresponding in style, is inlaid with bronze ornaments, intermixed with various marbles.

The ornaments generally are very light and beautiful. The basement contains sixty-four catacombs built under groined arches. Here repose the remains of the third earl. At the entrance of the wood, which shelters the house from the east, stands a square pedestal decorated with

antique medallions, and supporting an urn with various figures representing the sacrifice of Iphigenia.

Oporto, Portugal.



PORTUGAL is but a small country, in the form of an oblong square, extending from 37° to 42° N. latitude. Its greatest length is 350 miles from north to south, and its average breadth about 115 miles; consequently the area of its surface is about 40,000 square miles, and it is therefore not much more than half the size of Great Britain, and about one fifth the size of France. Yet the fleets and commerce of Portugal at one time were more extensive than those of any country in Europe; and for two centuries, the Portuguese were equally pre-eminent as adventurous and successful navigators. Madeira, the Azores, and parts of the gold coast, were settled by them early in the fourteenth century, and the kings of Portugal placed themselves at the head of that enthusiastic ardor, which, stimulated by the hope of finding a way by sea, to the countries from which the Europeans received ivory, gold-dust, and other commodities across the desert, was at length successful in accomplishing its object. The Portuguese led the way from Europe to India by sea; they planted colonies on the shores of the African continent, from its northern extremities almost to its southern headland; they held possession of extensive territories in India by the right of conquest, and claimed for themselves the exclusive right of navigating the Indian seas. In the new world, Brazil was one of the earliest European settlements; and Lisbon became the great European mart for the productions of India, Africa, and America. Being the first to open new paths to commercial enterprise, and engrossing the trade with newly-discovered countries, great profits were made. When the trade to India was car-

ried on overland, Venice was better situated as an entrepôt for the productions of the east than Lisbon; but when they were brought by sea, Lisbon, situated between the north and south of Europe, was most conveniently placed. The Portuguese endeavored to secure to themselves, if possible, the exclusive advantages which their adventurous spirit had placed in their hands. No other country was allowed to participate in the trade to the Portuguese settlements; and the right to traffic with the natives of newly-discovered countries, was permitted only to those who had sufficient interest to obtain a license, and who were often worthless adventurers. Though, for a considerable period, commerce flourished, and profits were great, the system of monopolies, both in the colonies and at home, was sure to undermine the prosperity of the country at some future period; and many subsequent evils are to be traced to illiberal restrictions framed in the hope of excluding other countries from the African, Indian, or transatlantic trade. These efforts to maintain a monopoly were fruitless; and when other nations became their competitors, Portugal was in her turn shut out from profitable branches of foreign commerce. Thus she was left to her monopolies. Manufactures declined, though having such extensive colonies, it might have been expected that the demands of the industry of the mother-country would have greatly increased; and the direct object of their restrictive system had been to promote the interests of Portugal. Political events rapidly hastened the crisis which would sooner or later have been occasioned by the unsound commercial policy of the country. In the fifteenth century, Portugal was successfully struggling for maritime and commercial pre-eminence; in the sixteenth century this object was obtained, and the people were reaping the benefits of their enterprise; but from 1580, when Portugal was annexed to Spain, its long and melancholy decline commenced. The authority of the mother-country being relaxed, its connexion with the colonies was weakened, and it was not powerful enough to defend them against aggressions, so that one by one they fell into the hands of the Dutch

or English. Of all its possessions in Africa, India, and the new world, only Madeira, the Azores, and one or two settlements in Africa and India now remain.

In 1640, Portugal once more became an independent state under the sovereigns of the house of Braganza, a member of which is the present occupant of the Portuguese throne. But this revival of its political life failed in quickening industry and commerce, which had gradually sunk into insignificance; and though in fact nominally independent, the principles of vitality which should have rallied and invigorated public spirit, were so stagnant, that foreign support was required to sustain the tottering state.

The great wine company of Oporto, established in 1754, was the offspring of the Anglo-Portuguese system of commercial policy. This body of monopolists assumed the right of regulating the production of wine in the upper Douro, which is the most valuable wine district of Portugal; and it even went the length of ordering vineyards to be destroyed, with a view of making the most of their monopoly at the least possible trouble. In the meantime, although the trade of England with France, a country containing more than ten times the population of Portugal, was suffered to decline, being restricted within the narrowest bounds to which the mutual wants of the two countries could be confined, the supposed advantages secured to Portugal failed in conferring those benefits upon her which were anticipated.

Under the administration of Pombal, a minister of superior energy, the country had displayed some signs of life, and useful reforms had been effected, but both were transient benefits, disappearing when the influence by which they had been produced was no longer felt. In 1807, amid the distractions occasioned by foreign invasion, the royal family of Portugal emigrated to Brazil, and from that time until the close of the war, life and property were insecure, and industry languished. After the peace, when the nations began to improve their internal resources, Portugal was not permitted to enjoy the same tranquillity, but was disturbed by civil dissensions, which raged from 1820 to the

expulsion of Don Miguel in 1834, and were but ill calculated to stimulate industry or to allow of the commencement of those enterprises which render a nation prosperous. But the energy and vigor which had distinguished the Portuguese of the fifteenth and sixteenth centuries were no longer the characteristics of the nation. Ignorance and misgovernment had produced their wonted effects. The foreign trade of Portugal, once more extensive than that of any other power, was chiefly carried on at the two ports of Lisbon and Oporto, with English capital; and but for the same stimulus, even the work of reproduction would have ceased in many instances.

At the termination of the late civil war, all the interests of Portugal were, as may be supposed, in a struggling condition; and the physical causes which obstruct the internal activity of the country necessarily render it a work of time to overcome these difficulties. Portugal consists in a great measure of mountain-ridges, divided by chasms. Alemtejo and Beira are the only provinces which contain plains of any extent. The rivers are few, and in summer even some which are navigable at other seasons, are nearly dry; there are no canals, and the roads are wretched.

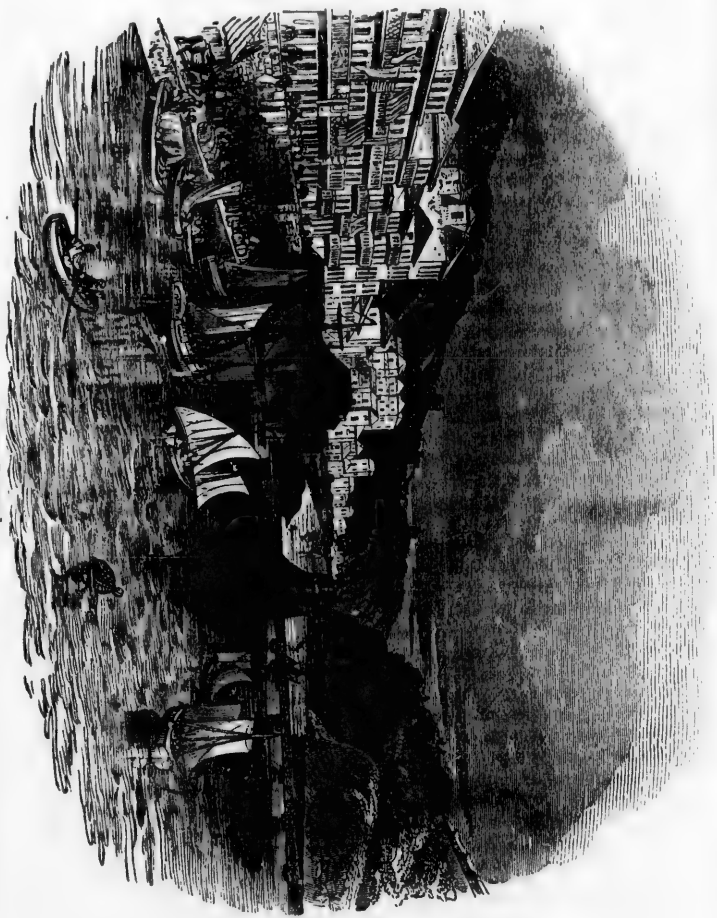
Thus the traffic between one part of the country and another is insignificant, and local prejudices of the most antiquated date hold undisputed sway in petty districts cut off from each other by ravines and desolate tracts. These circumstances have also their political influence. At present the country is too poor to construct good roads, but Roman energy overcame the natural difficulties which the surface presented, and there are the remains of highways which they formed. The want of roads is greatest in the south, but in the northern provinces the main roads are tolerably good, and there are bridges where they are required, but these are of ancient date, and not the result of recent improvements. The cross-roads resemble the tracks which cover the vast steppes of Russia. There are neither stage-coaches nor any system established by which travellers may pursue their journey with post-horses; Portugal, in this test of civiliza-

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Oporto, Portugal.



tion, ranking lower than any other country in Europe. The inns are few in number, and afford very poor accommodation, and, indeed, are to be found in the larger towns. It is evident that there are few arrangements based on the locomotive habits of the people. The wheel-carriages which are in use are in keeping with the roads over which they are to travel, and on many of the roads conveyance by wheel-carriages is not possible, and goods are carried on the backs of mules.

The mines of lead, iron, copper, and other metal, and the quarries of fine marble, all once profitably worked, were neglected. In the fourteenth century, when the population of Portugal was greater than at present, sufficient corn was grown to admit of some quantity being exported; but when trade had dwindled, and agriculture was the chief resource left, Portugal had become a grain-importing country. Butter and cheese are imported in considerable quantities from England and Holland. Cows are seldom kept, goats' milk being usually used. The wool of the sheep in the plains of Beira is of good quality, and greater attention might be advantageously paid to the fleece, which would become an important article of exchange with other countries. The development of the agricultural resources of Portugal, ought, indeed, now to be the great object of her rulers. With a fine climate, and a soil favorable to the production of corn, wine, oil, and a variety of fruits, the aggregate riches of the country might be easily increased. Maize and rice are raised, potatoes are not much cultivated. If irrigation were more generally practised, and other improvements introduced, the surplus produce of the soil would not be confined to fruits, such as oranges, lemons, citrons, chestnuts, almonds, &c., which it requires little exertion to render profitable objects of cultivation. The olive is rather extensively cultivated; but the produce is chiefly consumed at home, the oil forming one of the commonest ingredients of cookery in Portugal. The cork-tree is also a profitable native production. But the vine is the most valuable, and when, in 1765, in accordance with the spirit in which the industry of the country was regulated, the

vineyards on the Douro and Mondego were partially converted into corn lands by order of the government, they did not remain long diverted from their former more profitable uses.

Lisbon and Oporto are the only ports of considerable importance in Portugal. The entrance of the Tagus is magnificent, and ships of burden come close up to the town; but how sadly has the commerce of this once famous entrepôt declined! At one period 400 large ships traded between Lisbon and South America, besides those which were employed in the trade with Africa, India, China, and with the Moluccas, and other distant parts; but the whole foreign shipping of the country has now dwindled to 50 vessels; and in 1838 only 324 vessels entered the Tagus, including steamboats which arrive from England once a week, the aggregate tonnage of these 324 vessels, being 53,728 tons. London and Liverpool are the principal ports engaged in the trade with Portugal; vessels from these places proceed with general cargoes, and return with fruit, wine, wool, and other native produce. Oranges may be bought by retail at one penny sterling per dozen, and of course are much cheaper when purchased wholesale of the grower.

Coal is exported to Portugal from Newcastle and Glasgow, and the vessels which bring fish from Newfoundland and take back salt in return, are British. From other parts of the United Kingdom besides those just mentioned, vessels for Portugal usually proceed in ballast.

The manner in which the decline of foreign commerce occurred, may be easily explained. When the Dutch and English, instead of obtaining the produce of America and the Indies from Lisbon, proceeded direct to those parts of the globe, Lisbon ceased to be the great dépôt, which circumstances had temporarily made her. The trade with Brazil, was, however, preserved until within the last few years; but the monopoly of Portugal ceased when Brazil became an independent country, and England and other countries carry on a direct trade for cotton, sugar, and those articles of Brazilian produce which the mother-country formerly required to be brought to Lisbon previous to their distri-

bution in Europe. The produce and manufactures of Europe, also, instead of reaching the Brazilians from Lisbon, are received direct from the country whose industry has given them an exchangeable value. The obstacles to a more extensive export trade of the native productions of Portugal arise to a great extent from the cost and labor of conveying goods and merchandise; and thus, beyond a certain distance from places which are near a shipping-port or possess some facilities for reaching it, the stimulus to production which foreign commerce excites is not very strongly experienced. Still the trade of Lisbon is extensive, as there are few seaports in Portugal, and mercantile operations are concentrated chiefly in Lisbon and Oporto. The population of Lisbon is about 260,000. Oporto, a view of which is given in the engraving, is the second port of the kingdom, and delightfully situated on two hills near the mouth of the Douro, which winds among steep hills crowned with woods. It is on the left bank of the river, the suburb of Villa Nova being opposite, and connected with Oporto by a bridge of boats. Oporto appears to great advantage after escaping from the filth of Lisbon. The immense magazines of the great wine company are prominent objects of interest. The population amounts to about 70,000. There are, of course, many small ports, but with the exception of St. Ubes, they are merely the resort of coasting vessels. About 500 vessels load annually at St. Ubes with bay-salt, which Portugal exports to the extent of 100,000 tons annually. Ships with fish take back cargoes of this salt, which is of a good quality.

Since 1834, when Portugal entered upon a new era, her prospects have brightened, and if tranquillity be firmly established, and more enlightened sentiments prevail in her councils, the interests of industry will revive.

The monopoly of the Oporto wine company has been abolished. Some judicious reductions of taxes have been made, the currency has been improved, and the land of useless corporations declared public property. The government has determined to lend its aid to the improvement of roads, the construction of ports, the im-

provement of navigable rivers and seaports, and a land-bank, with four branches in different parts of the country, has been projected for the purpose of assisting the manufacturer and the agriculturist in the development of their interests.

STUDY A CHILD'S CAPACITIES.



F some are naturally dull, and yet strive to do well, notice the effort, and do not censure the dullness. A teacher might as justly scold a child for being near-sighted, as for being naturally dull. Some

children have a great verbal memory, others are quite the reverse. Some minds develop early, others late. Some have great powers of acquiring, others of originating. Some may appear stupid, because their true spring of character has never been touched. The dunce of the school may turn out in the end the living progressive, wonder-working genius of the age. In order to erect the best spiritual influence, we must understand the spirit upon which we wish to exert that influence. For with the human mind, we must work with nature, and not against it. Like the leaf of the nettle, if touched one way it stings like the wasp; if the other, it is softer than satin. If we would do justice to the human mind, we must find out its peculiar characteristics, and adapt ourselves to its individual wants. In conversation on this point with a friend, who is now the principal of one of our best grammar-schools, and to whose instructions I look back with delight—"Your remarks," said he, "are quite true; and let me tell you of a little incident which bears upon the point. Last summer I had a girl who was exceedingly behind in all her studies. She was at the foot of the division, and seemed to care but little for her books. It so happened that as a relaxation, I let them at times, during school-hours, unite in singing. I noticed that this girl had a remarkably clear, sweet

voice, and I said to her, 'Jane, you have a good voice, and you may lead in the singing.' She brightened up, and from that time her mind seemed to be more active. Her lessons were attended to, and she soon gained a high rank. One day, as I was going home, I overtook her with a school companion. 'Well, Jane,' said I, 'you are getting along very well, how happens it you do much better now than at the beginning of the quarter?'

"I do not know why it is," she replied. 'I know what she told me the other day,' said her companion.

"And what was that?" I asked.

"Why she said she was encouraged."

Yes, here we have it—she was encouraged.

She felt she was not dull in everything. She had learned self-respect, and thus she was encouraged.

Some twelve or thirteen years ago, there was in the Franklin school an exceedingly dull boy. One day the teacher, wishing to look out a word, took up the lad's dictionary, and on opening it found the blank leaves covered with drawings. He called the boy to him.

"Did you draw these?" said the teacher.

"Yes, sir," replied the boy.

"I do not think it is well for boys to draw in their books," said the teacher, "and I would rub these out if I were you; but they are well done, did you ever take lessons?"

"No, sir," said the boy, his eyes sparkling.

"Well, I think you have a talent for this thing. I should like you to draw me something when you are at leisure, at home, and bring it to me. In the meantime, see how well you can recite your lesson."

The next morning the boy brought a picture, and when he had committed his lesson, the teacher permitted him to draw a map. The true spirit was touched. The boy felt that he was understood. He began to love his teacher. He took delight in gratifying the teacher by his faithfulness to his studies; while the teacher took every opportunity to encourage him in his natural desires. The boy became one of the first scholars, and gained the medal before he left the school. After

this he became an engraver, laid up money enough to go to Europe, studied the works of old masters, sent home productions from his own pencil, which have found a place in some of the best collections of paintings, and is now one of the most promising artists of his years in the country. After the boy gained the medal he sent the teacher a beautiful picture as a token of respect, and while he was an engraver, the teacher received frequent tokens of continued regard, and I doubt not, to this day, he feels that that teacher, by the judicious encouragement he gave to the natural turn of his mind, has had a great moral and spiritual effect on his character.

THE OTTER.



LL anglers, with Izaak Walton at their head, have an inveterate hostility against the otter, inasmuch as it may be regarded as their rival in the destruction of the finny race, but not a fair rival, since it is ever upon the spot, incessant in its exertions, voracious in the extreme, and works like a poacher during the night, nefariously thinning the river of the finest fish, and thereby depriving the angler of his anticipated enjoyment. The complaint that "the otter devours much fish, and kills and spoils much more than he eats," is very true; for where his prey is abundant, he only devours the fish from the head downward to the vent, leaving the tail as a witness against him.

Like the fox and wild-cat, the otter is in fact a nocturnal beast of prey, remaining quiet in its retreat till the night has set in, when it begins its depredations, and continues them till the first beams of sunrise warn it to retire. The ease and celerity of its aquatic evolutions during the chase of its victims are astonishing; rapid as the trout is in its motions, arrow-

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Otter (*Lutra vulgaris*).

like as is its speed, the otter hunts it down, for his perseverance is equal to his celerity; he follows the fish in every turn and double, and maintains the pursuit with a pertinacity which generally insures success.

Fishes seem to have an instinctive dread of the otter, for it has been seen to collect into a shoal a vast number of trouts in a river, and drive them before it until the greater part have thrown themselves on shore.

The otter usually avails himself of any convenient excavation in the bank overhanging the water, especially if covered and concealed by the twisted roots of a tree, or overarched by intertangled shrubs or bushes. Buffon says that the otter will even take up its abode among piles of floating wood. Sometimes, however, its retreat is at a considerable distance from its usual fishing haunt. In the month of March, or early in April, the female brings forth her young, from three to five in number, upon a bed of sticks or grass, in the excavation she has chosen for their concealment, and she attends them with great solicitude. The strength of the instinctive attachment for her young is thus noticed by Steller. "Often," says he, "I have spared the lives of the female otters, whose young ones I took away. They expressed their sorrow by crying like human beings, and followed me as I was carrying off their young, which called to them for aid in a tone of voice very much resembling the crying of children. When I sat down in the snow they came quite close to me, and attempted to carry off their young. On one occasion, when I had deprived an otter of her progeny, I returned to the place eight days afterward, and found the female sitting by the river, listless and desponding, who suffered me to kill her on the spot, without making any attempt at escape. On skinning her, I found she was quite wasted away with sorrow for the loss of her young. Another time I saw at some distance from me an old otter, sleeping by the side of a young one about a year old. As soon as the mother perceived me, she awakened the young one, and enticed him to betake himself to the river; but as he did not take the hint, and seemed inclined to pro-

long his sleep, she took him up in her fore paws, and plunged into the water." It is during the spring and summer months, while the young of the otter are dependent upon the mother's care, that the destruction she makes among the fish is most considerable; she has not only her own wants, but those of her offspring to provide for, and her exertions during the silent hours of night are unremitting.

The sport of otter-hunting, formerly maintained by country gentlemen for the sake of the diversion, may be regarded as having been brought to a close in England, with the termination of the last century, and is now only practised for the sake of extirpating a noxious animal. At the present day, few or no packs of otter-hounds are kept.

THOUGHTS AND THINGS.



THOUGHTS never die. They are a part of the unseen things that are eternal. The minds in which they spring, or in which they are implanted, have "life everlasting;" and impressions made upon them, never cease to affect their welfare, for better or for worse. They make them better and happier, or worse and more miserable for ever.

Things perish. Most of them soon decay, and the most enduring will ere long be consumed. Our bodies, to us the most valuable and the most curious of things, are but dust, and to dust will shortly return. Impressions made on perishable things, must perish with them. Soon no trace will remain, to show that they have ever been.

He who endeavors to impart thoughts to the minds of men, toils for immortality. If he is successful, the produce, the effects, of his labors will endure for ever. When ages, and millions of ages shall have rolled away, they will still be operative for the benefit or injury of those who receive them.

But he who labors to produce things, labors for what is perishable. The productions of his toil, if it is even as successful as his heart desires, will soon cease to be. He sows to the corruptible, and "shall reap corruption."

The laborer who produces things, may do it for the service of the thought; and then his labors take hold on eternity and are of worth. The touch of faith changes their nature, and imparts to them an infinite value.

Man of thought! honor the man of toil! You could not live to think, and benefit the world by your thoughts but for his toil. It is only when the toiler toils for things as an end, and raises not his eye to the higher good to which those things should be made subservient, that he is despised. When he toils for himself as a being of thought, or for others that they may live and think; then he is your worthy brother. If he is, to the extent of his ability, a thinking man, his honor is not the less for his toil.

Man of toil! honor men of thought, whose thoughts are good. There are many such. Some originate thoughts, and others only convey them from one to another. Some impart them to children and youth, in the school or college; and others to adults in the pulpit, or by the press. Some do it by the voice, others by the pen. But in whatever way they work, they are all producing that which will be eternal in its duration and usefulness, and is therefore infinite in its value. The fruits of their labor will still exist and retain their value, when all the productions of the farm and the shop shall have ceased to be. One of them may show you, on a few inches of paper, the produce of many days, or weeks, of earnest effort. It looks small, but despise it not. It may impart a new thought to thousands of minds, and to each of them it may be of endless benefit and of countless worth. If it is evil, it may rend a nation; if it is good, it may save a soul.

It is fit that they who produce what is infinitely valuable, should be well paid for it; and they will be. Men may be so blind as not to see the worth of their productions, and the thinker may not be paid

by them, not be paid with honors that matters little. If he thinks that he may be thus paid for doing, he debases the honors to the service of the vile, and deserves to be unpaid; but if he aims as worthily as he should, at rewards in the world of thought and of eternity, he will find them there; nor mourn that this thoughtless world has paid him poorly.

JUNE.

THE goddess Juno is said to claim the honor of giving name to this month; others assert it to be derived from Junius Brutus. By the Saxons, it was termed *Sere-monath*, or dry month.

June is really, in this climate, what the poets represent May to be—the most lovely month of the year. Summer is commenced, and warm weather thoroughly established, yet the heats rarely rise to excess, or interrupt the enjoyment of those pleasures which the scenes of nature now afford. The trees are in their fullest dress, and a profusion of the gayest flowers is everywhere scattered around, which put on all their beauty just before they are cut down by the scythe, or withered by the heat.

Soft, copious showers are extremely welcome about the beginning of this month, to forward the growth of the herbage.

One of the earliest rural employments of this month is the shearing of sheep, a business of much importance in many parts of the country, where wool is one of the most valuable products.

This country is becoming celebrated for its breeds of sheep, which yield wool of various qualities, suited to the different branches of the woollen manufactory.

The season for sheep-shearing commences as soon as the warm weather is so far settled that the sheep may without danger lay aside great part of their clothing.

Before shearing, the sheep undergo the operation of washing, in order to free the wool from the foulness it has contracted.

KARA HISSAR.



THE town of Kara Hissar, in the province of Anodoli, in Asia Minor, is about 180 miles distant from Constantinople in a direct line; about 200 miles from Smyrna and the Aegean sea; and 130 miles from the port of Adalia on the southern shores of the Mediterranean; consequently it is placed nearly in the centre of the peninsula known under the name of Asia Minor. There are no properly-constructed roads in any part of the Turkish empire, though the remains of the Roman lines of communication are still to be observed, and some of the Roman bridges are yet in use; but Kara Hissar enjoys the advantages which are derived from such roads as are common to the country. The road from Smyrna to the east, toward Armenia, Georgia, Persia, and the countries bordering on the Euphrates, passes through it; and it is the rendezvous of the caravans proceeding from Constantinople. Hence nearly all European manufactures and colonial produce which are distributed to the eastward and southward, pass through Kara Hissar. This renders it a place of considerable importance, and stimulates the industry of the inhabitants; as the numerous caravans which pass through it bring produce and merchandise from distant parts, and the shops are accordingly well supplied. A great proportion of the houses are built of stone.

The manufacture of carpets is chiefly carried on in the country between Kara Hissar and Smyrna; but fabrics of wool and tapestry are among the staple articles of industry in the former place. From the large quantity of opium cultivated in the neighborhood, it is generally called Afium Kara Hissar.

The situation of the town is striking. Lofty and naked rocks rise up on one side, and on the other is a range of high fruitful hills covered with vineyards. A small stream, which in winter and spring is abundantly supplied, runs through the town. The circumference of the town is nearly three miles, it contains ten mosques,

and the population is supposed to exceed 50,000. The castle is situated at the top of a steep rock, nearly 200 yards in perpendicular height. At the summit there is a wall flanked by round towers, within which are some old cannon made of iron bars and pieces of old armor. There are places for holding water, partly of stone, and partly hewn out of the rock, and a deep well. If supplied with water and provisions, the place would be impregnable. This strong natural citadel appears only to have been intended for occasional use in times of trouble. The entrance could be closed by a gate. The western frontier of Asia has often been the battlefield of contending powers, and such a place as this castle might be intended as the last resort of the vanquished. Asia Minor was ravaged by barbarians, and afterward for two centuries endured the tyranny of the Persian yoke.

FORM AND STRUCTURE OF THE EARTH.



NE interesting peculiarity in geology is the close relationship in which it stands to many other departments of science, lending light to them, and receiving it from them in return. The whole subject of organic remains belongs not less to zoology and botany than to geology, and the time is perhaps not far distant when it will be in a great measure resigned to them, and geologists be willing to accept of the facts from the students of these branches of natural history, and only apply them to their own researches. Many parts of it are, in like manner connected with natural philosophy, astronomy, and chymistry; facts from all these sciences forming some of its most elementary principles. The shape, dimensions, and density of the globe, are important elements in astronomical calculations, but of almost equal consequence to the true theory of the earth's structure.

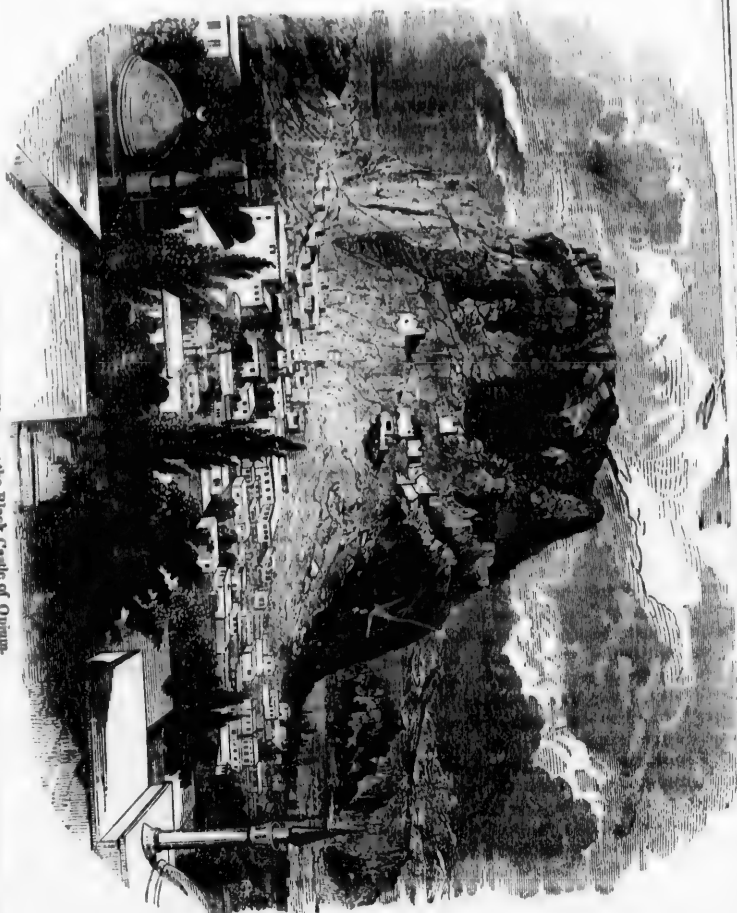
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Around Kara Hisar, or the Black Castle of Opium.



Our planet is not an exact sphere, but only a near approach to this figure. It is flattened or pressed in at the poles, and bulges out in the region through which the equator passes. In consequence of this, the surface of the sea under this line is about thirteen miles higher or more distant from the centre than at the poles. It is supported at this height by the rotation of the earth on its axis, which has a tendency to throw any loose body off from the surface, in the same manner as a stone whirled round in a sling. Were the earth, therefore, to stand still, the waters would instantly commence flowing toward the poles, and deluge the highest land around them. Such a catastrophe is prevented by the permanent regular motion impressed on the globe, and its stability, with the proper distribution of land and water on its surface, secured by the form which it now possesses. This is, notwithstanding its various inequalities, very nearly that figure which all the particles composing it, if allowed to move freely among each other, would assume. Were the earth fluid, it would acquire this shape exactly, and its near approach to it, is often taken as a proof that it was formerly in that condition. This, however, is not necessarily true, since it may be shown that the causes now acting on the surface—the wearing down of the highest mountains and hardest rocks, and the transportation of their materials from place to place by rivers and tides—would, in the course of time, produce the same effect. It is also but reasonable to suppose, that if the earth was created at first of solid materials, these would be disposed in that form which was most consistent with the continuance and order of the system. Nothing we perceive in nature at all supports the notion, now so prevalent, that the glorious and perfect arrangement of the universe is the mere necessary development of physical laws. The all-regulating hand of the Creator, seems to have been always present in every corner of his works.

To weigh the earth in a balance, might appear to surpass not merely the ability, but the presumption of men. Yet they have not only attempted, but performed this with surprising accuracy, and its specific gravity, or weight compared to that of an

equal mass of water, is known more nearly than that of most bodies on its surface. This is rather more than five times (5.66) that of water, or half that of pure silver, and a third less than iron; gold is more than three times, and platinum and some other metals almost four times heavier, so that only a small part of the interior can be filled with matter nearly equal to these metals in density. The average of the whole globe is only twice that of the exterior crust, and as the pressure in the interior must be enormous, condensing any substance exposed to it to a vast amount, it has not unreasonably been imagined that the interior is filled with substances lighter than those forming the external crust. But the heat which hot springs, volcanoes, and experiments in mines, show to exist in the interior, must act as an antagonist power to the compression, and modify its results to a great extent. Hence much uncertainty prevails in regard to the interior structure of the globe.

That portion of the crust which is accessible to man, is not very extensive; the deepest mine, added to the highest mountain, not exceeding six English miles, or about a thirteen hundredth part of the earth's diameter. Nor is even this visible in any one place, the deepest natural or artificial sections being much less. This crust is composed of rocks, these of simple mineral, and these again of the elementary substances of the chymists. Of the latter, fifty-five or fifty-seven are enumerated, but some of them are very rare, and only found in a few unimportant bodies. The great mass of the earth's crust, consists of scarcely a dozen elements, either alone, or more commonly united with each other in various proportions. These are named simple minerals, which have not only a definite chymical composition, but also a peculiar regular structure, and a tendency to assume certain external forms. This is named crystallization, and is well illustrated by salt or sugar, when slowly deposited from a solution. With rare exceptions, each distinct chymical compound has its own form of crystals, and also peculiar colors and other physical properties, by which they are distinguished from all others. The number of these minerals now known is about four

hundred, but not a seventh of these are of common occurrence, and the vast proportion of rocks are composed of less than a dozen.

Geologists use the word rock in a more extended sense than in common language. All the great extended masses composing the crust of the earth are rocks, and even beds of sand or clay receive the same name. Rocks are either simple, consisting of one mineral, or compound, composed of two or more.

Quartz, or the silica of the chymists, occurs in a great variety of forms. It is itself a compound substance, formed of oxygen, the vital air we breathe, and of silicon, formerly believed to be a metal, but now placed by chymists in a different class. Its compound, silica, is the most abundant substance on the globe, forming more than half of that part of it with which we are acquainted. The common white "chuckie-stones" of children, is one of its most characteristic varieties; the gun-flints of the sportsmen were fashioned from another, the dark color being caused by some extraneous mixture; and the fine pure rock crystal, the Cairngorm stones, the amethyst, cornelian, and jasper, are all other varieties of this mineral, in more or less purity. It has many colors, yellow, brown, red, green, blue, and black, but is most commonly white or gray. It also appears when crystallized in several forms, but very frequently in six-sided prisms, ending in a pyramid with the same number of planes.

Besides the quartz forming the sandstone, two and sometimes three other minerals are found in it. The quartz is usually of a white color and glassy aspect, but along with it is another mineral of a duller white or red color, and less hard, named felspar. Of this there are several varieties, differing in chymical composition. Besides silica and alumina, which form clay when decomposed, the common felspar contains potash; a second variety contains soda, and a third also lime.

Granite, besides these two minerals, contains mica, well known from dividing into thin, transparent, elastic plates, of a bright silvery color. It has so much the appearance of a metal, that ignorant persons often mistake it for silver, and the

yellow varieties for gold. Common granite consists of these three minerals, in various proportions, and is of a white or red color. Besides them, however, a fourth mineral, of a dark green or black color, occurs in it. This is named hornblende, and much resembles another green mineral, named augite.

Of these five minerals, now named, almost the whole rocks on the earth consist, and there are few which do not contain one or other of them. The only other substances of much importance are lime, the carbonate of which forms the common limestone, and marble; and iron, a small proportion of which is found in almost every rock, while its ores, from which the metal can be prepared, are very abundant. From these few minerals, with some others of rarer occurrence, a great variety of rocks are formed, some geologists enumerating from two to three hundred species.

The three kingdoms of nature, the animal, vegetable, and mineral, though widely distinguished, are yet closely connected. The lifeless inorganic mineral could exist without the plant or animal, but these are not equally independent. Not only does the mineral kingdom form the rocks and soil on which they live and vegetate, but from it also they draw their food and nourishment. The plant converts the inorganic elements into a state adapted for the support of animals, which seem incapable of performing this office for themselves, and, on their dissolution, their bodies are again restored to the earth whence they have literally been taken. There is thus a continual wonderful circulation of material elements, from the mineral, through the plant and animal, back to the mineral again. But the plants deriving their support from the soil, it is necessary that they should find in it the various elements on which they exist. Were any of these wanting, they would either perish, or become sickly and unfit for the nourishment of animals. Hence the great importance of the compound nature of rocks, from whose decomposition the soil is formed, as plants are thus furnished with those substances which they require. The two rocks just mentioned are a good illustration of this. The sim-

ple rock, the sandstone, consisting of silica alone, decomposes into a very barren and unfruitful soil. In granite, the silica also prevails, but mixed with six or eight other substances, and the soil, though far from fertile, is much more so than that over pure sandstone; while, hills, though high, are covered with fine grass, and in the south of Europe, with forests of oaks and chestnuts. But still greater variety of rocks, and the more compound soil they produce, are more favorable to vegetation.

The sandstone and granite also furnish good illustrations of some other distinctions of great importance in geology. The name of the former implies that it consists of sand, that is, of grains of a round irregular form. These grains are of various sizes, from a pin head, or even less, to that of a pea or marble. When larger, the rock is named a conglomerate, though its structure of broken fragments is still the same. In granite, the distinct minerals are mixed together in apparently an irregular manner, but each portion has a definite form, is bounded by straight lines or smooth planes, and the rock, when newly broken, shows numerous shining surfaces which reflect the light, instead of a rough uneven fracture like the sandstone. The granite is thus named a crystalline rock, whereas the sandstone is said to be uncrystalline, and this difference is believed to arise from a difference in their mode of origin. Sand—broken irregular grains—is produced by water from the destruction of previous rocks, as on the banks of rivers or the seashore. Where we see heaps of sand strewed on the surface, we immediately conclude that water, and water in motion, has in some former time been there. Grains or crystals, like those of the granite, do not arise in this way. They are only seen to form where the substance composing them has been dissolved, either in a fluid or by heat, so that its particles can unite in a regular manner. Hence it is supposed that granite, and the rocks which resemble it in structure, have been formed in one of these ways, and probably in the latter, or from a state of igneous fluidity.

But, it may be asked, do the external forms of these rocks agree with this mode

of origin deduced from their internal structure? Sand or mud, deposited from water, is seen to form beds or layers of greater or less extent, and these should be seen in the sandstone rocks, if this is the manner in which they have been produced. And such, every one who has looked into a sandstone quarry, must have observed to be the case. The sandstone is, on this account, said to be stratified, or to form strata, a word derived from a Latin verb signifying to strew or spread out, as the materials of the sandstone beds are supposed to have been at the bottom of the sea, or in some other large body of water. The granite having a different origin, does not exhibit this peculiarity. It appears in large irregular masses, divided in various ways, but not into regular beds; and most of the rocks, whose structure is like its crystalline, are also massive and unstratified. Many of them, indeed, appear like a mass of molten metal poured out through an opening on the surface of the ground. Some of these details may seem uninteresting to our readers, but they constitute the first principles of all geological science, and even in themselves are not barren of remarkable results. It was long a favorite endeavor of philosophers, misled by the desire of simplicity, to endeavor to explain all the phenomena of the earth by one agent, by fire or by water. But even these two rocks, found in great abundance in most quarters of the earth, show that neither of these theories is alone sufficient, and that facts require both to be combined. It will also be found that both agents, and the rocks which they produce, serve important purposes in the economy of creation, and produce, by their union and opposition, a system that is far more perfect and beneficial than would have resulted from either of them alone. Even looking at these rocks, in the low and limited light of materials for human dwellings and other edifices, it will be found that each possesses peculiar properties and advantages, which could not have been combined, and one class of which, therefore, must have been sacrificed, had fire or water alone prevailed in the formation of the earth.

TAKE care of your business, and your business will take care of you.

THE NARWAL.



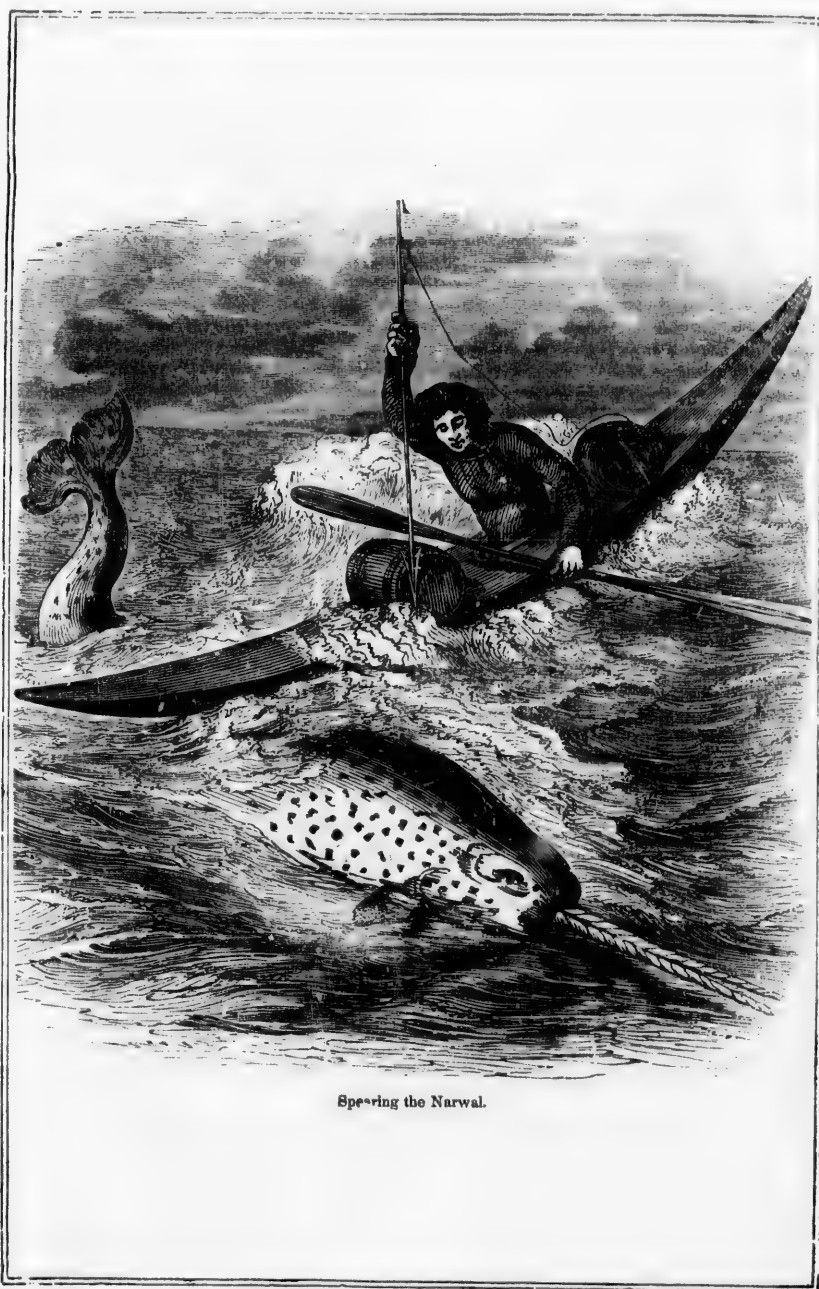
sembles that of the porpoise; it has however no teeth, properly so called, but two tusks, or spears, implanted in the intermaxillary bone, but of which the right remains usually rudimentary and concealed during life. The left tusk, on the contrary, attains to from five to seven or eight and sometimes ten feet in length, and projects from the snout in a right line with the body, tapering gradually to a point, with a spiral twist (rope-like) throughout its whole extent. In structure and growth, this tusk resembles that of the elephant, being hollow at its base, or root, and solid at its extremity.

The tusk or spear of the narwal constitutes a powerful weapon, which it is reported to use with terrible effect. It is however its only weapon, for it has neither the formidable teeth of the grampus nor of the cachalot. Crantz thus describes the narwal: "This species is commonly twenty feet long, and has a smooth black skin, sharp head, and little mouth. A round double-twisted horn runs straight out from the left side of the upper lip. It is commonly ten feet long, as thick as one's arm, hollow inside, and composed of a white solid substance. It is probable he uses this horn to get at the sea-grass, which is his proper food, and also to bore a hole in the ice with it when he wants fresh air; possibly also as a weapon against his enemies. Another little horn, a span long, lies concealed in the right side of his nose, which probably is reserved for a fresh supply, if some accident should deprive him of the long one; and they say that as a ship was once sailing at sea it felt a violent shock, as if it had struck upon a rock, and afterward one of these horns was found fastened in it. Formerly these horns, or tusks, were looked upon to be the horns of the fabu-

lous land-unicorn, and therefore they were valued as an inestimable curiosity, and sold excessively dear, till the Greenland fishery was set on foot, when they found them in the northern parts of Davis's straits in greater plenty than anywhere; yet for sometime they carried on the cheat."

Captain Scoresby found the remains of cuttle-fish in the stomachs of several which were opened by him, and similar remains were also found in the stomach of one driven ashore near Boston, Lincolnshire, England.

In general form, the narwal resembles the porpoise, or grampus, but the head is small and blunt; the mouth is small, and not capable of much extension. The under-lip is wedge-shaped. The eyes are placed in a line with the opening of the mouth, at the distance of thirteen or fourteen inches from the snout, and of small size, being about an inch in diameter. The spiracle, or blow-hole, is a single orifice of a semicircular form, on the top of the head, directly over the eyes. The fins, or flippers, are about fourteen or fifteen inches long, and from six to eight broad, their situation on the sides of the animal being at one fifth of its length from the snout. The breadth of the tail is from fifteen to twenty inches. There is no dorsal-fin, but a sharp ridge runs down the centre of the back, the edge of which is generally found to be rough and worn, as if by rubbing against the ice. Crantz describes the narwal as being black; it is only in young specimens that this color can be said to prevail: at an early age the narwal is blackish-gray on the back, with numerous darker spots and markings running into each other, forming a general dusky-black surface. The sides are almost white, with dusky and more open markings; the under surface is white. In adult specimens, the ground-color of the back is yellowish-white, with markings varying from dark gray to dusky-black, and of a roundish or oval figure, with interspaces of white or yellowish-white between them. The skin resembles that of the common Greenland whale (*balena mysticetus*), but is thinner. The female narwal produces a single young one at a birth, which she nourishes with milk for



Spearing the Narwal.

several months: the teats are situated near the origin of the tail.

The narwal is gregarious, associating in troops of from six or eight to twenty or more; and numbers are often seen clustered together, both in the open sea and in bays and inlets free from the ice, forming a compact phalanx, moving gently and slowly along. Under such circumstances the independent movements of each individual are necessarily embarrassed, so that a considerable slaughter may be easily effected among them. When attacked at such a time, the hind ranks, instead of turning against their assailants, press upon those before, sliding their long weapons over the glossy backs of their leaders, and all becomes disorder and confusion. Opportunities of this kind are welcome to the Greenlanders, to whom the narwal is an important animal.

The origin of the word narwhale, nar-whal, or narwal, is said to be from the Teutonic nar, or ner, which signifies a beak or projecting snout; and wal, wale, or whale, an indiscriminate word, in the same great family of languages, for any of the cetacea.

AVARICE.



UT little use is there in trying to settle the question what vice is practised most extensively and productively of most evil. Alas! there are many that thrive so alarmingly, that it is hard to say to which we should assign in point of strength and mischievous influence the unenviable superiority. There can be no question, however, that "the love of money," which is declared by the highest authority to be "the root of all evil," is sadly prevalent and awfully injurious. Into whatever department of the great social economy we look, we see this mean and hateful passion working banefully. All men, as the author of "Mammon" has well remarked, are bewailing its power and prevalence: "The

legislator complains that governments are getting to be little better than political establishments to furnish facilities for the accumulation of wealth. The philanthropist complains that generous motives are lost sight of in the prevailing desire for gain, so that he who evinces a disposition to disinterested benevolence is either distrusted as a hypocrite or derided as a fool. The moralist complains that 'commerce has kindled in the nation a universal thirst for wealth, and that money receives all the honors which are the proper right of knowledge and virtue.' The candidate for worldly advancement 'honor protests against the arrangement which makes promotion a matter of purchase, thus disparaging and discouraging all worth save that of wealth. The poet laments that 'the world is too much for us; that 'all things are sold; that everything is made a marketable commodity and 'labelled with its price.' The student of mental and moral philosophy, complains that his favorite sciences are falling into decay, while the physical are engrossing every day more respect and attention; that 'the worship of the beautiful and good is giving place to a calculation of the profitable; that every work which can be made of use to immediate profit, every work which falls in with the desire of acquiring wealth suddenly, is sure of an appropriate circulation; that we have been led to 'estimate the worth of all pursuits and attainments by their marketable value.' Yes, Mammon has other assailants beside the divine. Still, however, his votaries, or as we should rather call them, his slaves, are countless; and among these there are not a few who do not so much as suspect that they are held in bondage. He has so many, and these so shrewd and sensible pleas to urge; a decent independence, amplified means of doing good, provision against future contingencies, giving one's children a fair start in life—these and the like are so necessary, so proper, and so becoming, that, were we all father-confessors, we should find, like St. Francis de Sales, that none would come to us to confess the sin of covetousness.

The battle for wealth, is, we believe, one of the sorest and most fatiguing

which mortals fight. The toils of the roughest campaign, the hardships of flood and field, are light in comparison with those of the man who has set his heart not on empires but on gold—whose thoughts and projects by night and by day have all one aim; the acquisition of money. An inlombitable perseverance must have fallen to his lot, or his spirit would sink in the struggle. What a round of schemings! what hosts of speculations! what distracting risks! what tear and wear of brain in calculating the chances in his favor! what feverish disquietude! what racking cares! what twinges of conscience, too! There are, it is to be hoped, comparatively few professional misers—few whose every thought and energy are given to money-making—who deny themselves every enjoyment, and hoot at every scheme of benevolence.

These libels on humanity are, we would hope, few indeed. But we have plenty of such characters in miniature. We have men in abundance, who, were they unfortunate enough to live twice or thrice longer than others, would be exhibitions of the miserly passion, quite as pitiable as the Dancers, the Elweses, and such like. The demon has been generated into a multitude of little demons; the burrowing worm has been cut in pieces, but each piece has become a burrower in turn. It has been as with the giant in the fable, whose head was chopped off, but a host grew in its room; or as the dragon-tooth that was buried in the earth, but an army arose as its harvest!

Now these persons do not need to be told to what privations and sickening cares they are subjected. They confound two things, which every well-regulated mind keeps quite distinct—wealth and its uses. They forget that money is an instrument, not an object—a means, not an end—a scaffolding, not a building. They fall in love with the key which opens the palace door; they sit down on the threshold, turn it in their hands, and call it god: poor dupes, they never cross the threshold to gaze on the beauty and magnificence of the interior! They please themselves with the covers on the table without taking their dinner. And even when the disease does not exactly go this length, we know

that the solicitude which attends the getting and the keeping of wealth, is harassing in the extreme. Multiplying, as riches invariably do, a man's relations and movements, they make him in the same ratio a broader mark for the arrows of misfortune. They may remove all anxiety as to temporal evil—hunger, cold, the world's scorn. Yet how many imaginary evils, artificial wants, and false appetites do they create! And how do these increase in strength and number as they are fed! how dependent the most independent people of the world! The cares which attend the acquisition of wealth, the ten thousand means by which he may be deprived of it, keep the money-hunter the victim of incessant disquiet, place his happiness at the mercy of so many contingencies, that we need not startle when told that the "abundance of the rich will not suffer them to sleep." He is like a man living in a castle besieged on every side; not a wind can blow, not a change can be mooted or made without causing him fresh alarm.

Avarice, besides being a troublesome vice, is a very dangerous one. Suppose its victim successful in his pursuit of riches, to what serious perils is he exposed? Among these the fostering of pride is perhaps the most prominent. We are all mutually dependent. But the very rich man, at least if avaricious, is exceedingly apt to forget this. He finds that he has got something into his possession that has a power resembling that of the fabled philosopher's stone. It can turn all it touches into gold. He finds that "money answereth all things;" that it can procure him admission into almost every circle, and make him favorably regarded when in it; that it can convert the rake into a paragon of worth; with marvellous ease blot twenty or thirty years from the calendar of time; smooth the furrowed brow of age, and plant roses on the faded cheek. He finds his wants not merely supplied but anticipated. He finds that every man is ready to serve him; that many (most disinterested persons!) are even willing to let their own business alone to attend to his. Now, it is not in poor human nature to resist this intoxicating influence. A man, or a few men, in an age, may rise superior

to it; but to expect this of mankind generally, or even very extensively, is quite idle. The man will grow proud, and who knows not that pride is fatal to our peace? And worse than all—for there is a close alliance between the two—contempt for his fellow-men may eventually grow into a jealousy of the Divine superiority—all those humbling truths, on the reception of which his eternal welfare depends, he will be prone to spurn. The great Teacher of mankind made few statements stronger or more emphatic than this: "It is easier for a camel to pass through the eye of a needle, than for a rich man to enter into the kingdom of God." There is, indeed, no vice against which the inspired writers caution us in more solemn and startling terms than that which we are denouncing. "Take heed and beware of covetousness," is a warning which the messengers of Heaven again and again reiterate. And the sacred volume teems with examples of the dangers and sad consequences of this vice. "Whether we advert to the losses and sufferings of Lot, the stoning of Achan, the leprosy of Gehazi, or the fate of Judas, the secret of their punishment is explained when the Almighty declares—'For the iniquity of his covetousness was I wroth, and smote him.' And what do we behold in every such infliction but an earnest of its coming doom—the scintillations of that wrath, the flashes of that distant fire, which is kindled already to consume it?"

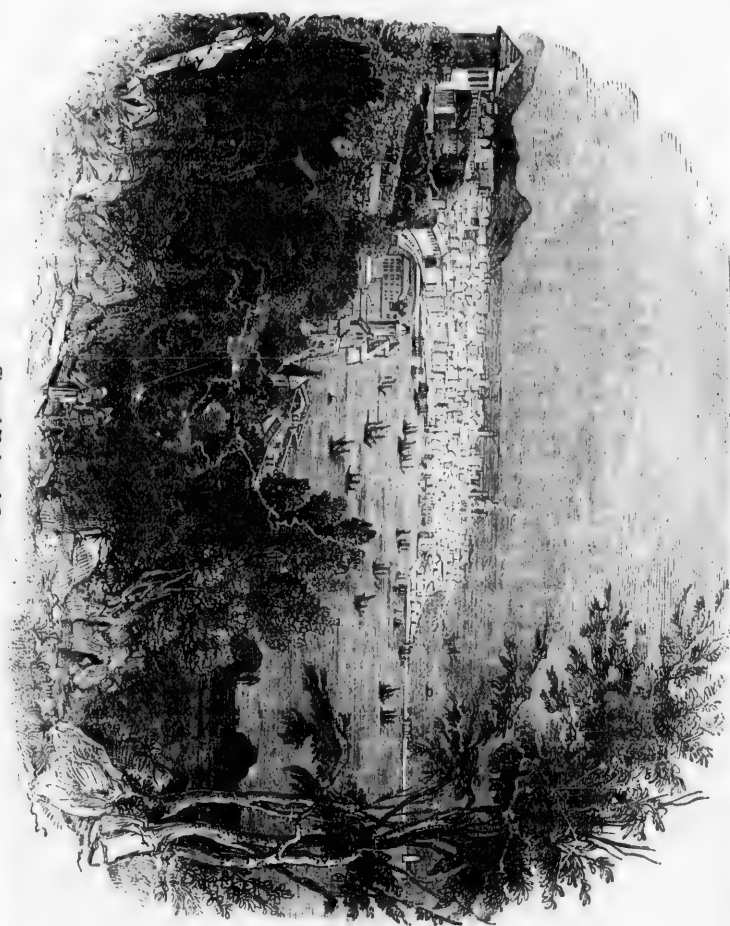
There is a meanness, moreover, about this vice which must strike every thoughtful mind. The Scriptures call the covetous man an idolater. And assuredly there is no meaner idolatry. One can pardon, in certain moods of mind, the man who worships the sun in the heavens with his burning glories, or those incarnations of mental power and energy, Shakspeare, Milton, or Napoleon; but the man who bends his soul at Mammon's shrine looks a being of quite another order—he lacks the poetry of other idolaters. And then, what a train of evils flow from this vice. It poisons the peace of families, it works the ruin of empires. In almost every land it frames and defends laws which equally outrage mercy and justice. It opposes itself to every benevolent en-

terprise. It impedes the progress of truth, and liberty, and love. It dries up the most delicious sympathies that play in the breast of man, and makes him, in a thousand ways, the wronger and oppressor of his fellow. Against the inroads of a vice thus dangerous, thus annoying, thus prolific of evil, every man who would consult his own happiness and the welfare of society should beware. Speaking of avarice, the venerable Howe says: "It is a soul-wasting monster, that is fed and sustained at a dearer rate, and with more costly sacrifices and repasts than can be paralleled by either sacred or other history; that hath made more desolation in the souls of men than was ever made in those towns and cities where idols were served with only human sacrifices, or monstrous creatures satiated only with such food; or where the lives and safety of the majority were to be purchased by the constant tribute of the blood of not a few; that hath devoured more, and preyed more cruelly upon human lives, than Moloch or Minotaur!"

GENOA.



GENOA is situated within a bay in a wide gulf, which extends in a crescent-like form from the shores of France to those of Tuscany. These were the shores of the ancient republic. The harbor is in the same form, and about a mile and a half in length, its entrance being protected by two moles which approach within half a mile of each other. The view of the city from the sea is truly magnificent. Several hills rise from the harbor and form a semicircle, on the declivity of which the city is partly built; and a succession of fine buildings extending two miles, like wings, lines a narrow strip of land between the sea and the adjacent heights. Palaces built of marble and surrounded by gardens, with churches and convents, rise one above the other on the steep sides of the hills be-



City and Harbor of Genoa.

hind, whose summits are crowned with ramparts, forts, and batteries, forming a double line of fortifications, which protects the city on the land side, the exterior line being above eight miles in length. Beyond these hills are the higher Apennines. The streets of Genoa, with few exceptions, are narrow, dark, steep, and crooked, a combination of defects which is not usually found in so large a city; but, like those of Venice, the streets of old Genoa were constructed only for foot-passengers. The Strada Balbi and Strada Nova are spacious streets lined with the marble palaces of the Genoese patricians, some of which contain galleries of paintings, and are otherwise splendid, both by their architecture and interior decorations. Many of the churches are handsome, and the former palace of the Doges, with several other public buildings, are deserving objects of interest.

Genoa and the territory adjoining, divided into seven provinces, is now a duchy forming part of the kingdom of Sardinia. The province of Genoa contains 208,000 inhabitants. The population of the city is 94,000, and the suburbs contain 20,000 more. There are several small maritime towns in the province. The duchy has its own institutions—a high court of justice and a university, and civil employments are filled by Genoese. The garrison is under strict discipline, and much care is taken to conciliate the inhabitants. The liberal spirit of the government is highly praiseworthy when it is recollected that Genoa enjoyed for a long period an independent existence, and that many old prejudices still exist between the Genoese and the Piedmontese, which their forced union, by the treaty of Vienna in 1815, was calculated to keep alive for some time.

The decline of Genoese commerce is to be attributed to internal factions and foreign spoliation, and to those changes which occur in the natural course of events; but it is still very extensive, and has been reviving ever since the peace.

NEVER put off till to-morrow what you can do to-day. When angry, count ten before you speak; if very angry, count a hundred.

THE MYSTERIES OF CREATION.



THE power of vitality so wonderfully conspicuous in the vegetable kingdom, which enables a seed to retain its vegetating power though dormant for many years,

has a remarkable analogy with the revivification of some of the animalcules. The rotifer redivivus, or wheel animalcule, can live only in water, and is commonly found in that which has remained stagnant for some time in the gutters of houses. But it may be deprived of this fluid, and reduced to perfect dryness, so that all the functions of life shall be completely suspended, yet without the destruction of the vital principle; for this atom of dust, after remaining for years in a dry state, may be revived in a few minutes by being again supplied with water.

Nothing stands alone in this world. "The chain holds on, and where it ends, unknown." How strongly is this felt even in the vegetable creation! Who does not perceive it while looking on the principal constituents of plants, i. e., carbon, oxygen, hydrogen and nitrogen, and contemplating their gradual transformation into vegetable albumen, and vegetable caseine, or on any of the elementary forms of the nitrogenized compounds, so absolutely essential, directly or indirectly, to animal life. And even should it also occur to the mind, that the same process ceases not with us, but that these human bodies, thus marvellously made and nourished, are, even the organs by which the high functions of the brain are performed, material and perishable, and that "we feed ourselves to feed the worms," and, being dust, return literally to that dust again; let us not pause on the threshold of the argument, where despondency might await us, but go beyond on through the portal, and calmly consider what deduction we may draw, by the simple light of reason, from this undeniable truth. We see that everything around us here, when it has accomplished the end of its being, is not annihilated, but only transformed into some other state, in which it still continues to work out the

will of Him who created it: every material thing perfectly fulfils its destined purpose; but man has that within which assures him that he neither is nor does all that the soul could be and perform were it disencumbered of the body in its grosser state. Has he not, then, the strongest reason to confide to Him who gave that body for good purposes here, that He will, at its dissolution, still make it subservient to his wise intentions, and after he separates it from its present union with the soul, will assuredly place his rational creature in a condition to be and to do all for which that creature was made? Man would then no longer be the exception to the rest of sentient beings, their wishes and desires are so arranged, that the means of their gratification are within their reach on earth; we, on the contrary, feel aspirations which never can be fully gratified here, and whose very existence foreshows a time when they will have their fruition. The moral consequence we may draw from this is almost too obvious to require notice. If we look forward to a state in which the body shall be changed that its present enjoyments can exist no more, while those of the soul shall last for ever, how important is it that the will, which triumphs over everything that is material in us, should be so regulated, that when that state arrives, it may not long for those earthly pleasures which are gone to return no more, but may have already anticipated in hope the reality it shall then experience. The wise of old, though but dimly perceiving what is assured to us under the pledge and seal of God himself, could yet draw the right inference from those dim perceptions. When in the varied phases of the butterfly's frail life they saw prefigured their own future destiny, they could urge their disciples to purify the soul, and fit it for companionship with eternal love. In the grain of wheat apparently perishing in the earth, but springing up in due season in a form "the same, and yet another," the apostle found a similar correspondence with our lot; all can see the appropriateness and beauty of the comparison, and all having this hope, may they continue "steadfast and immovable" in all that is good, knowing that their labor shall not be in vain.

ANECDOTES OF WASHINGTON AND MORRIS.



MONG the interesting anecdotes related to us most graphically and feelingly, of Washington, by Mr. Custis, when in New York city lately,

was one on the landing of the general at Whitehall, when he was about to be sworn as president of the United States. As the general was stepping on shore from the vessel, he was addressed by an American officer with, "Sir, I have the honor to command a guard of soldiers to escort you to your residence, and also on any other occasion you may desire." "A guard!—a guard for me!" exclaimed Washington, rising in his stature, and quite overlooking the guard of some fifty soldiers, "why, sir, I need no guard. I ask for no other guard than the affections of my countrymen!" Whereupon, with a significant wave of his hand, his guard fell into the rear. Mr. Custis says this anecdote was frequently related, among others, by John Carroll, who was then with the general, and heard the remark of Washington, tending to show that he was a great and good man, and one worthy the affections of the people; this alone would satisfy him, as it should all others, of the fact.

Another anecdote related to us by Mr. Custis was this: When Washington had marched his army as far as Elk river, on his way to Yorktown, Virginia, to attack Lord Cornwallis, the soldiers, then long without their pay and greatly fatigued, requested their arrearages, and as paper money was of little value to them, they desired it in silver. This was an alarming difficulty with Washington at this crisis, for he knew full well that his soldiers should have their pay, and yet he was extremely anxious to reach Yorktown with his troops as soon as possible, lest Lord Cornwallis should escape with his forces, which Washington had so confidently hoped to capture. In this dilemma he immediately called to him Robert Mor-

WASHINGTON
RIS.

MONG the interesting anecdotes related to us most graphically and feelingly, of Washington, by Mr. Custis, when in New York city lately, of the general at as about to be the United States. stepping on shore addressed by an "Sir, I have the rd of soldiers to nce, and also on ay desire." "A me!" exclaimed his stature, and ard of some fifty ed no guard. I an the affections Whereupon, with hand, his guard stis says this an- ated, among oth- o was then with remark of Wash- at he was a great worthy the affec- alone would sat- thers, of the fact. ed to us by Mr. Washington had as Elk river, on rginia, to attack diers, then long atly fatigued, re- and as paper e to them, they was an alarm- ington at this ell that his sol- day, and yet he reach Yorktown as possible, lest scape with his n had so confi- In this dilemma im Robert Mor-

ris, to whom he related in confidence and with much feeling the particulars of the case, and the probable effects, should it be found impossible to raise the money. Mr. Morris, who as it is well known, was a financier, as well as true patriot and honest man, saw at once the difficulty and its probable consequences, and, bethinking himself for a moment, he said, "Ah, I have it, general, I'll obtain the money."

The French fleet lay far below in the bay, yet thither Mr. Morris immediately pursued his way. Addressing himself to the count under whose command the fleet was, he represented that anticipated funds from the government for the payment of the troops not having arrived in season, it became necessary to pay them before reaching the battle-ground, where success was certain for the combined French and American forces; therefore, he would take the liberty of asking him—as a tried friend of the cause of freedom—for an accommodation for the present, and that he himself would be responsible for the amount if required, &c. This was done with so much address, and at the same time with so much truth and confidence, that it produced the desired effect.

The count readily and very politely proffered the requisite sum of silver; and proceeding himself to his iron chest, took it out in crowns done up in parcels, and delivered it to Mr. Morris, who, thereupon, proceeded with a light heart to the American camp, and to the no less joy of Washington and his brave but suffering army. The army, it is well known, proved successful, and perhaps, this circumstance contributed in a great measure to this result.

There were two or three anecdotes of Robert Morris, told by Mr. Custis, which showed that he was one of the most important men, if not next to Washington himself, in the happy results of the revolution, and Washington ever esteemed him as such. In this connexion, Mr. Custis related most touchingly the visit of Washington to the jail in Walnut street, Philadelphia (where Mr. Morris was afterward confined for debt!) on his arrival in that city. The interview was indescribably affecting, and so also was a visit subsequently paid by Mr. Custis to

Mr. Morris, when Mr. M. was near his death. But what rendered these last anecdotes more interesting on this occasion, was the fact that they were addressed to a group of gentlemen, one of whom, was the venerable son of Robert Morris.

THE MIRAGE.



F the many extraordinary appearances exhibited occasionally by unusual occurrences in nature, few have been observed with more astonishment than the phenomenon designated by the French "Mirage." This is an appearance often presented to the traveller in places where there is a large extent of arid country acted upon in a powerful manner by an almost vertical sun, in which the earth puts on the appearance of an extended lake or river, although no water is in reality to be found near the spot.

It is in Egypt that this phenomenon is most frequently observed. The uniformity of the extensive sandy plains of lower Egypt is interrupted only by small eminences, on which the villages are situated in order to escape the inundations of the Nile. In the morning and the evening objects appear in their natural form and position; but when the surface of the sandy ground is heated by the sun, the land seems terminated at a certain distance by a general inundation. The villages which are beyond it appear like so many islands situated in the middle of a great lake, and under each village an inverted image of it is occasionally seen. As the observer approaches the limits of the apparent inundation, the imaginary lake which seemed to encircle the village withdraws itself, and the same illusion is reproduced by another village more remote.

It is not, however, only in the African deserts that this appearance has been witnessed: many other parts of the world, where there are large tracts of flat land, often exhibit the same phenomenon.



Mirage in the Plains of Mexico.

Baron Humboldt describes several instances witnessed by him during his travels in South America, especially in the barren steppes of the Caraccas, and on the sandy plains bordering the Orinoco. Little hills and chains of hills appeared suspended in the air, when seen from the steppes at three or four leagues distance; palm-trees standing single in the Llanos appeared to be cut off at bottom, as if a stratum of air separated them from the ground; and, as in the African desert, plains destitute of vegetation appeared to be rivers or lakes.

The view accompanying this article represents a case of mirage witnessed in the plains of Mexico.

However supernatural these phenomena appear, they have been satisfactorily accounted for by natural causes. It is only, however, within the last forty years that an explanation was attempted.

Monge, the French philosopher, and Mr. Huddart in England, were among the first to explain the principle of the mirage, and they both referred it to an unusual refraction of the atmosphere caused by different densities of the strata of air consequent on the heat of the ground.

The lower portion of the atmosphere being warmed by receiving heat from the earth, it becomes less dense than the strata of air above; but as this must receive a portion of heat from the lower strata, the air will be gradually denser as the distance from the earth is increased; so that an aerial prism will be formed, through which, as in a common glass prism, distant objects will be seen reversed.

M. Biot adopted the same idea, and explained the circumstances on which he founded his opinion, at great length in a memoir presented to the French Institute; and Dr. Wollaston proved the truth of the theory by a very ingenious experiment, by which the appearances presented by the mirage were accurately imitated. He procured a square glass bottle, a third of which he filled with clear syrup; to this he added some distilled water, and filled up the remaining third of the vessel with rectified spirits of wine. The different specific gravities of these fluids did not permit them to mix with each other, ex-

cept in a slight degree at the points of contact. This produced slightly different densities in those portions of the contents of the vessel, being in fact similar to glass prisms, and on looking through the mixture at an object placed at a slight distance behind, a reversed image of the object became apparent.

Dr. Brewster adopted a better plan to render the true effect apparent. He says: "Although the experimental method of illustrating this phenomena of unusual refraction, as given by Dr. Wollaston, is in every respect an excellent one, yet the employment of different fluids does not represent the case as it actually exists in nature." The method employed by Dr. Brewster, consists in holding a heated iron above a mass of water bounded by parallel plates of glass. As the heat descends through the fluid, it produces a regular variation of density, which gradually increases from the surface to the bottom. If the heated iron be now withdrawn, and a cold body substituted in its place, or the air allowed even to act alone, the superficial strata of water will give out their heat, so as to have an increase of density from the surface to a certain depth below it. Through the medium thus constituted all the phenomena of unusual refraction may be seen in the most beautiful manner, the variations being produced by heat alone.

An appearance similar to the mirage, and produced by similar means, may be observed on looking along the surface of the boiler of a steam-engine; or if we even heat a poker, and look along its edge at an object placed at a little distance, it will be observed inverted in the air at about a quarter of an inch from the poker, the surrounding objects appearing to be floating in water.

THOSE WHO NEVER COMPLAIN.

LIFE is nothing without a touch of the pathetic; a joke is very well in its way, and as man is the only animal that laughs, he ought to indulge himself now and then in this his peculiar faculty and privilege—

but we can not be always laughing. Besides, it shows a want of dignity to be everlastingly on the broad grin, the titter, the giggle, or the chuckle. We owe it to ourselves to look solemn, and to wear a serious countenance occasionally—or, if we are particularly fond of dignity, we may always have a solemn look. There is something more interesting in crying than in laughing, and it would be impertinent to ask what they are laughing at, but if you saw as many crying, your sympathy would lead you to ask what they were crying for. If, on inquiry, it should be found that their tears were flowing from an inadequate or unworthy cause, you would feel that the dignity of grief was much abated. What then? Why then, if there be a want of dignity in giving way to the expression of grief when the cause is trivial, there must be great dignity in not grieving when there is an abundant cause of grief—hence the pleasure they have in letting all the world know that they never complain, and in talking of their exemplary patience and unparalleled fortitude, in bearing such a burden of woe without a word of complaint.

CAUSES OF THE FRENCH REVOLUTION.



LONG before the advent of the revolution, the condition of France had to discriminating observers, indicated the approach of the impending storm. The monarchy was worn out, the nobility corrupt, and the clergy degenerate. A thousand years had almost elapsed since the establishment of the former under Clovis, and the system was thus hastening to that state of decay which seems inseparable from all human institutions. The vices of one king, and the virtues of another, had alike contributed to produce this result. The long and expensive wars of Louis XIV. and the

profligacy of Louis XV. had exhausted the resources of the kingdom, and alienated the affections of the inhabitants; and the quiet, unobtrusive, undecided character of Louis XVI. was calculated rather to encourage than to suppress the rising flame. This unhappy monarch, if endowed with few qualities which attract our admiration, was possessed of many which engage our esteem; and had he lived in an earlier era, he would have been considered the beau ideal of that patriarchal system on which the government was supposed to be founded; but on the stormy era when he ascended the throne, his virtues tended only to excite the political tempest which swept him and his family from the earth.

The number, the frivolity, and the viciousness of the nobles had increased to a surprising degree; and it was mainly these that gave rise to the revolution. According to Madame de Staël, there were nearly one hundred thousand of them; as not only was the head of a family noble, but likewise all his descendants; and titles of nobility were besides obtained from numberless offices, or were openly purchased by money. The nobles possessed many privileges—they contributed nothing to the support of the state, and they enjoyed a monopoly of all its higher offices. They alone could hold commissions in the army or navy, and fill the more important and lucrative posts of civil government; and to such an extent had their influence attained, that, in the very year before the revolution broke out, they had caused the feeble king to pass a decree that none but those noble for four generations should hold a military commission; while they, at the same time, declared themselves exempt from contributing in any way to the expenses of the state: and yet, at the moment when they assumed such privileges, they were themselves the very slaves of the court. A post, a pension, or some frivolous honor, was at any time sufficient to gain the best of them. A few, indeed, stood aloof, and were apparently exempt from this universal degeneracy; but it was either because, like the duke of Orleans, they had been disappointed at court; or, as in the instance of the smaller noblesse in La Vendée, be-

V. had exhausted kingdom, and alienated the inhabitants; and his undecided character calculated rather to oppress the rising monarch, if enemies which attract our eyes of many which had he lived in would have been content of that patriarchal government was supported on the stormy throne, his virulence excite the political him and his family

frivolity, and the nobles had increased; and it was mainly the revolution. According to Staël, there were thousands of them; as well as of a family noble, descendants; and titles were obtained from the nobles possessed contributed nothing to the state, and they filled all its higher offices and held commissions and filled the more important posts of civil government to an extent had their part, in the very year broke out, they had begun to pass a decree favorable for four general military commission; at the same time, declared them contributing in the service of the state: and then they assumed to serve themselves the state. A post, a pension, was at any time the best of them. The nobles, and were appointed to this universal despotism either because, like they had been dispossessed as in the instance of La Vendée, be-

cause their private fortunes were unfit to cope with the costly dissipation of the metropolis. And yet these alone stood by the monarchy in the hour of danger; those who now fluttered around the throne, flying on the first approach of alarm, when, in its defence, they might have been expected to die like men. A few only of all their number were free from this general character, and it must be admitted of these that they showed a spirit worthy of a better fate if not a better cause.

The clergy were also a numerous body, and their conduct, as a class, had tended greatly to demoralize the country.

They were upward of 80,000 in number, and consisted of two classes—one formed of the branches of the nobility, designed for the higher offices of the church, and comparative idleness; the other, comprehending the plebeian portion, destined to labor and indigence. Many of the former of these were men of the highest talent, and celebrated in Europe as statesmen; but others had no higher claim than to the rank of wits—which, however, in the French court of that period, was of no unimportant order, as Chateaubriand, one of the staunchest supporters of the ancient dynasty, mentions, in his "Historical Studies," that a bon-mot was then considered of more importance than an oration or victory. And though most of the poorer order were virtuous men, they were generally uneducated, bigoted, and swayed by the populace, to whom they owed their support. Like the nobles, the clergy contributed nothing to the maintenance of the state, except the benefit of their prayers, which they were forced to give by statute; but the writings of Voltaire and his associates had effected such a change in the once "most Christian" country, as its rulers had long been termed by the pope, that this only provoked derision. It was said to be a provision proper enough, but one that brought no relief to the exhausted treasury. The poorer clergy, however, were unable, and the superior unwilling, until it was too late, to grant any other. Hence the whole property of the church was, shortly after the revolution broke out, confiscated at a blow, and the higher clergy fled the country, while the humbler, for the most part,

ranged themselves on the side of the revolutionists.

The people were in a state of abject slavery. All the ancient feudal usages which improved or alleviated their condition, had either been removed by violence or impaired by time. Only a third of the land belonged to them, and from this, besides supporting themselves, they were constrained to sustain the state, and uphold the church and nobles. They alone contributed to the expenditure of the state, and, besides maintaining it, they had to pay heavy dues to the nobles, and tithes to the clergy. Yet they possessed not the slightest privilege. If they entered the army or navy, they could never obtain commissions; if they devoted themselves to the civil service of the country, they could never rise above the humblest rank; if they engaged in commercial pursuits, they were fettered by restrictions; and if they devoted themselves to agriculture, their fields were ravaged by the game-privileges of the nobles. An English traveller, Arthur Young, who travelled through France a short time before the revolution, represented them as ground to the earth; and fifty years previously, the celebrated Earl of Chesterfield had declared that all the germs of revolution were then to be found in the country. But the government itself appeared wholly unconscious of danger; and under the auspices of the beautiful and high-minded but unfortunate Marie Antoinette, when on the verge of destruction, basked as if in the meridian of fortune. In proportion as the country grew poorer, its rulers increased in extravagance. "Profusion was substituted for parsimony," says Mr. Alison, "in the hope of circulating money; and prodigality for economy, in the expectation of allaying discontent." But this profusion was extended only to the courtiers, and their immediate adherents alone reaped the benefit of it, while it was withdrawn from the nation at large; and this at a time when the people were oppressed by such restrictions that they could embark in few trades without a license from government, or procure even law without openly purchasing justice; for before the revolution, the chief judicial offices were either hereditary or sold to

the highest bidder, who had thus no alternative but to make a trade of justice by retailing it in turn.

While affairs were in this state, the American revolution broke out, and gave an impulse to the opinions of the French encyclopædists which it was found impossible to repress. "In an hour," says Burke, "more unfortunate for himself than for a neighboring monarch, Louis XVI. was induced, by his cabinet, to send assistance to the revolted colonies of England, and by thus attempting to diminish the value of another's crown, he lost his own." He discovered this with regret, when regret was unavailing; and the measures he adopted to check the popular enthusiasm, when Lafayette and his associates returned to France from their successful assistance of the Americans, by increasing the severity of the restraints under which the people then labored, only accelerated the march of opinion which he was anxious to arrest. Even then his conduct was marked by that vacillation and inconsistency which characterized all the acts of this ill-fated monarch; for, in the very hour when he was receiving Franklin with the highest honors, as the representative of the American people, he launched the edict already mentioned against popular expectations at home; and his courtiers were encouraged to sing the praises of liberty in other countries; while not a vestige of it existed in their own. "The court," says a cotemporary writer, "freely indulged those sallies without for a moment anticipating their possible application, or surmising that what they admired for Philadelphia, could ever be desired in Paris."

But while all these causes influenced, it was the want of money to provide for the national expenditure that was the immediate forerunner of the French revolution. The country was exhausted alike by the victories of one war and the reverses of another, the magnificent projects of Louis XIV., and the costly profligacy of the fifteenth prince of that name. Nor was the expenditure diminished during the reign of Louis XVI., though the conduct of that prince was pacific, and his character comparatively pure. He had him- self sent his plate to the mint, and the

queen was supposed to have pawned her diamonds, in order to provide for the expenses of the government. But still there was a deficiency of eight millions sterling in the revenue, and while the people groaned under imposts, the state staggered under debt. One minister after another was brought in to relieve these embarrassments, but each of them failed, and one of them, Neckar, to whom the revolution has, by Napoleon, been imputed, but apparently on unreasonable grounds, published, on his dismissal from office, a famous account, named the "compte rendu," which disclosed those appalling deficiencies, and increased the general dissatisfaction that prevailed. Under these circumstances, the chief minister, Calonne, an able, though specious, plausible, and once profligate, but now patriotic man, convoked an assembly called the notables, consisting of the leading persons in the kingdom, and proposed that the privileged orders should tax themselves; but the nobles and higher clergy resisted the innovation: and when he attempted to levy a new impost, they declared that this could be done only by the authority of the states-general—a body representing all classes of the kingdom, and unheard of for almost a century before. The word states-general was no sooner pronounced, than it was reiterated by every order in the community, and all, excepting the government, concurred in desiring its convocation from which they expected relief. The court, dreading such an assemblage, attempted to supersede it, by proposing what was termed a "cour plénière," or meeting of the leading nobles and clergy, with a few of the higher merchants, instead. The privileged orders resisted, and when a troop of dragoons were sent to arrest D'Espremenil, one of their number who had made himself obnoxious to the government, they declared they "were all D'Espremenils." A struggle ensued, but the court was, in the end, obliged to submit; and, on the proposal of the nobles, a decree was issued for the convocation of the states-general, which was to sweep both nobles and court from the land.

So long an interval had elapsed since the meeting of this body, that few were aware of its functions, or even of the form

which it ought to assume. It had not assembled since the year 1614; and the court party maintained that its sole duty was to grant taxes; but the populace and many of the nobles asseverated that it was also to inquire into grievances. On the subject of its formation they were equally discordant. The clergy and nobles asserted that it should consist of two bodies to represent *them*, and one on the popular side—each equal in number, and sitting in different chambers; but the court, piqued by the opposition it had experienced from the two former parties, and desirous to conciliate the latter, decided that the third estate, or plebeian portion, should equal in number the other two united; and Neckar, the well-meaning but incompetent Genevese banker, who had again succeeded, as prime minister, the obnoxious Calonne, temporarily disposed of the question of separate chambers, by leaving it undecided. This was a fatal error; for, shortly after the meeting of the states-general, the popular party refused to proceed to business except along with the clergy and nobles; and a few of these going over to the plebeian side, the whole were soon constrained to follow, where they were, of course, out-voted by the third estate, which consisted of a moiety of the nobles and was now, by these desertions, converted into a majority. It is for this, and the neglect to provide for separate chambers, that Neckar has been arraigned by Napoleon as the cause of the revolution; but his opinion was probably influenced by his antipathy to Madame de Staël, that minister's celebrated daughter.

"Such," says a recent writer on the subject, "was the state of France in 1789, when that star of revolution arose which was destined to blaze so long on her horizon, purifying her political atmosphere, but blighting almost all on whom it shone—destroying her ancient monarchy, and one of the most amiable princes that ever sat upon her throne." A terrible elemental convulsion seemed to forbode the tempest that followed. In the midsummer of 1788, a fierce hurricane and hail-storm arose, which swept the harvest from the fields, destroyed the vintage on the ground, laid whole provinces in ruin, and committed such devastation that the terror-struck in-

habitants believed it the forerunner of the destruction of the world. "But they had yet to learn," says the author already quoted, "that terrible as this convulsion of nature was, it proved infinitely less destructive than that which was about to arise among men."

The state of Europe, too, at this period, favored the approaching strife. The whole continent was plunged in a state of listlessness or degradation. Britain alone preserved any vestige of freedom. From Holland, liberty had been expelled; and it scarcely found a shelter in Switzerland—the only other part of modern Europe in which it had ever taken root. Italy was engulfed in slavery; and Germany, though it possessed the rudiments of free institutions, was in a state of equal political nonentity. Spain and Portugal were sunk in slavish superstition; and in Russia the very name of freedom was unknown. On all sides there was an apathy, indicating that the old system of governments was worn out; and men were either disposed to favor, or unable to resist, the new opinions to which the American revolution had given birth.

GLENGARIFF.



GLENGARIFF, or "the rough glen" is a very romantic spot on the southern coast of Ireland. Most travellers who have been attracted to the lakes of Killarney by their natural beauties, and the legendary tales connected with them, have wandered thence to the scarcely less famed and perhaps more beautiful scenes around Glengariff. The entrance to the little bay of Glengariff is protected by a small island, on which has been erected a martello tower, crowning the prospect with one of the most picturesque objects in landscape-scenery. The bay is surrounded by hills clad in the richest verdure, here bending by a gradual declination toward the sea,



Bay of Glengaulf, Ireland.

and there rising from the waters with the most high and majestic appearance. The brightest hues of nature are reflected in the still bosom of the deep—the yew, the holly, and the arbutus, giving a peculiarly graceful appearance to the nearer hills; the various colored heaths brighten up the middle distance; and in the extreme verge of the prospect the huge forms of the higher mountains, but faintly seen, appear like spirits rising into the clouds. All tourists speak in raptures of Glengariff and the surrounding scenery. The climate of this part of Ireland is extremely mild and healthy, the most tender plants surviving throughout the winter, even in the open air. Like most beautiful or romantic parts of Ireland, Glengariff boasts its fairy legend. In one part of the small but delightful bay of Glengariff, the sea being protected from the wind by a projecting point of land, there is a constant calm; and other peculiarities of this spot have rendered it the object of one of the fairy superstitions of the south of Ireland. It is called the Bog of Glengariff Bay.

MEMORY.



It has often struck us, that, in our modern educational improvements, one point of very considerable importance is apt to be lost sight of, or at least to be treated without that degree of attention which it merits. We condemn, and justly, the parrot-like fashion in which the young were made to go through their school-tasks in days past, learning by rote and by heart lessons, of the signification and value of which they were left in almost total ignorance. But, in changing the system, and making the meaning the primary matter in every lesson taught, there is some risk, it seems to us, of our running into error in an opposite direction, and overlooking one real advantage, which most certainly attaches so far to our old academical customs. We refer, it will be obvious, to the exercise and cultivation of

the memory. *Memoria augetur exercendo* (the memory is strengthened by exercise) is an adage of equal antiquity and truth; and the committing of things to memory, even before a comprehension of their meaning is attained, may be of no slight service to the young, inasmuch as the adage in question is thus fulfilled. Even the long *propria quæ maribus* rules of Riddiman's grammar, which used to be con-signed to memory, we remember, by boys who had not the faintest idea of their meaning, may not have been unserviceable in their way, simply from the powers of recollection being thereby called forcibly into play. But there is no occasion for the object on which the memory is exercised being something unintelligible. Far from it. It would be easy, in communicating rational instruction to the young, and exercising their minds upon comprehensible lessons, to accompany such tutelage with the culture of the memory; and this course, we argue, would be a judicious and most useful one. In fact, the culture of the memory seems to us a matter of such high consequence, as to merit being ranked as a distinct item in every syllabus of juvenile instruction. It is a secondary point, certainly, to the conveyance of actual knowledge, but still most important, though it be subsidiary.

Those who have not particularly attended to the subject would probably be surprised, on inquiry, to find to what an extent mere strength of memory appears to have contributed to the greatness of literary men in all ages. Our own times have presented at least two striking cases in proof of this assertion. Speaking of Lord Byron, Mrs. Shelley, an observer of great acuteness, and who had the advantage of ample opportunities of intercourse with that noble poet, has made the remark that his natural abilities did not strike her as very extraordinary; in truth, she rather thought meanly of them; but "his memory," she says, "was altogether supernatural." Every page of his writings supports this statement. In the first place, as regards the simple remembrance of words, the endowment in question appears to have been of vast use to Byron. To the great strength of his memory, we may ascribe the astonishing copiousness and

felicity of language, and the facility of rhyming, displayed in the brilliant galaxy of poems which he poured forth in rapid succession—a succession so rapid, indeed, as to have no parallel in literary history. Again, when his poems are fully examined, we find in them comparatively few traces of distinct originality of thought. A vast number of his ideas and images are but able and improved versions of the conceptions of others, for which he had drawn upon the stores of his “supernatural memory.” His skill in this mode of adopting and transplanting is seen to a remarkable extent in his tragedy of *Werner*; but the same thing might be shown in a thousand places in his works, where he has not acknowledged any obligation, as he did in the particular case mentioned. An example of his talent at adopting thoughts with emendations is seen in the fine passage:—

“And the waves bound beneath me like a steed
That knows its rider.”

“Here,” says Moore, “the poet has evidently caught an image in Beaumont and Fletcher, and, by a change, greatly improved it:—

‘No more shall we two feel our fiery horses
Like proud seas under us.’”

The illustrations which Byron gave, in his juvenile satire, of the faults and follies of “English Bards,” were almost all directly borrowed from the other objects of his attack, “Scotch Reviewers.” In short, everything tends to prove that much of Lord Byron’s success in literature rested on his “supernatural memory.” And if we turn to his school-days, we shall find distinctly the origin of his endowment in this respect. He tells us, that if he shone in anything it was in public recitation or declamation. He probably little thought that the getting up of pieces by heart to display his boyish elocution, was to bear so materially on his after-greatness. The case is an instructive one.

Not less strikingly apparent was the value of a well-cultivated memory in the case of Sir Walter Scott. That he possessed such a gift is undeniable. The *Eutrick Shepherd* tells us that being once on the Tweed with him, engaged in salmon fishing by night, Sir Walter requested the Shepherd to amuse a leisure moment

by repeating a certain ballad. The ballad was of some length, and had never been printed; and Hogg could not remember more than the first verse or two. To his great surprise, Scott, though the piece had been but *once* repeated to him, commenced and went over it, word for word, from beginning to end. Admitting that this story may be a little exaggerated by the worthy Shepherd, there can be no doubt that it is so far true as to afford a good instance in proof of Sir Walter’s wonderful memory. The surpassing usefulness of the endowment to him need scarcely be pointed out. It would and did save him much of the trouble of invention, as well as of research and references, in concocting his exquisite narratives. In the similar compositions of other novelists, we can always discern annoying marks of their having “read up” for their tasks. Digested long in his extraordinary memory, the information of Sir Walter comes out as naturally and easily as if he had been actually a familiarized denizen of the various places and times he describes. To his memory, too, is to be ascribed that marvellous felicity of illustration which constitutes so large a portion of the charm of his works. Whatever subject engaged his pen, he could abundantly enliven and illustrate it with anecdote or saying, humorous or pathetic, as the case might require, but always appropriate. From the stores of his reading being more recondite, and also from the fact of his having obtained many of his countless good things from oral converse with the world, the extent to which Scott drew, through his memory, on the brains of others, is neither so great, nor, as far as it goes, so discernible, as in the case of Byron.

While thus endeavoring to enforce the propriety of cultivating the memory, by the examples of such men as Byron and Scott, it must not be thought that we are blind to the share which the natural talents of the individuals had in causing their success, and elevating them to greatness and renown. Our object chiefly is to impress on the minds of our readers a sense of the value of a powerful memory, as an auxiliary endowment; though at the same time, beyond all question, a strong and well-stored memory has often gone

far to make up for the want of original powers of mind, and has enabled those possessed of it to outshine others who possessed originality of mind without the accompanying advantage of strength of memory. Hitherto, the case of literary men only has been referred to; but the same arguments apply to all positions which men can occupy, where combination or calculation are matters of frequent concernment, and, in short, to all situations where the records of experience are available or influential. Though of more consequence in some circumstances than in others, a powerful memory is indeed a possession of paramount importance to all mankind.

The natural mode of cultivating and strengthening the memory, is, as the old adage says, by *exercise*; and wonderful, indeed, is the extent to which its powers may be thus carried. Perhaps Scott owed his great memory in part to the numerous attempts which he must have made while collecting ballads in his youth, to bear such pieces off by heart, when his time and other circumstances did not permit of immediate transcription. Other noted men, however, have even far excelled him in respect of the same endowment. Magliabechi, the famous Florentine, had acquired great command of memory. He was librarian to the grand duke of Tuscany, Cosmo III., and, in this situation, became what his friends called a universal index. It was common for the learned to consult him when they were writing upon any subject, and he could tell them not only what previous authors had directly treated of the same matters, but could also point to such as had briefly and incidentally alluded to them, naming the author, the book, the words, and often the very page at which each passage occurred. Magliabechi's memory was once put to a severe trial. A friend gave him a manuscript composition to read, and after a time received it again. Shortly afterward, the individual came to Magliabechi, lamenting the loss of the manuscript, and entreating him to put down as much of it as he could remember, that it might be re-written. The other consented, and, sitting down, wrote over the production, word for word, from

beginning to end. This marvellous power of recollection arose chiefly from his situation of public librarian, calling for the constant exercise of the faculty.

La Motte, the French dramatist, on hearing a play once read, could repeat any given scene of it, word for word. Cicero mentions one Carneades, a Greek, who had cultivated his memory to such an extent, that ultimately he was able to repeat by heart the contents of most of the books in a whole library, as if he read from the pages of the books themselves. Mithridates, a powerful sovereign of Asia Minor, who had under his rule twenty-two nations or tribes, all of them speaking either distinct languages or dialects of languages, found it necessary to attempt the acquisition of all these tongues, and by a strong exertion of memory mastered them so far as to be able to converse with fluency in each. The famous Bishop Jewel, disliking the practice of reading sermons, accustomed himself, early in life, to get his discourses by heart, and brought his memory in the end to a wonderful degree of perfection. His powers in this respect were often tested by his friends. If forty or fifty words, picked at random from languages alike barbarous and unknown to him, were once read over, he could, after a little reflection, repeat them either backward or forward, as he might be desired. The celebrated scholar, Scalizer, was even more distinguished for strength of memory than Bishop Jewel, or any of the individuals here mentioned.

It would be an easy matter to multiply examples where the cultivation of the memory has strengthened its powers to an astonishing degree. Samuel Johnson is a case in point. The force of the faculty in him, in his latter days, was doubtless owing to its culture during the composition of his dictionary, and it gave him much of his brilliant conversational readiness. It is, however, unnecessary to carry this argument further. Every reader who has perused the narratives of persons long held in captivity, will remember that, in almost all instances, one of the mental phenomena recorded by each prisoner was a great increase of the powers of memory, resulting from the necessity of exercising and depending on the faculty, in the ab-

sence of all the aids to be found in ordinary circumstances. A series of notches in a stick, or knots on a string, conveyed often to the poor captive a whole history. Such cases would alone prove the value of exercise to the memory. If, then, strength of memory be a possession of such consequence as we have endeavored to show it to be, at the risk, perhaps, of being held to press on the attention a self-evident fact; and if the plain and obvious mode of strengthening the memory is by exercising it, should not this end be kept prominently in view in the education of the young? To us, as has already been observed, the culture of the memory seems a matter of so much moment, as to merit being ranked as a distinct item in the programme of juvenile education.

Remarkable displays of strength of memory have occasionally been made in public by individuals professing to follow a peculiar and secret mode of fixing facts on their recollection. One young boy, who lately exhibited in public in this country, gave answers to a list of questions, amounting to many thousands, and some of them involving long sums of figures. A long list of figures, set down at random, was also repeated by him backward, without error, after being looked at for a few seconds. Whatever was the mode of doing this, it was obvious that much of the boy's power of memory arose from exercise—exercise, it may be, with a help, but still exercise. Such cases only tend to bear out what has already been said.

PLATO.

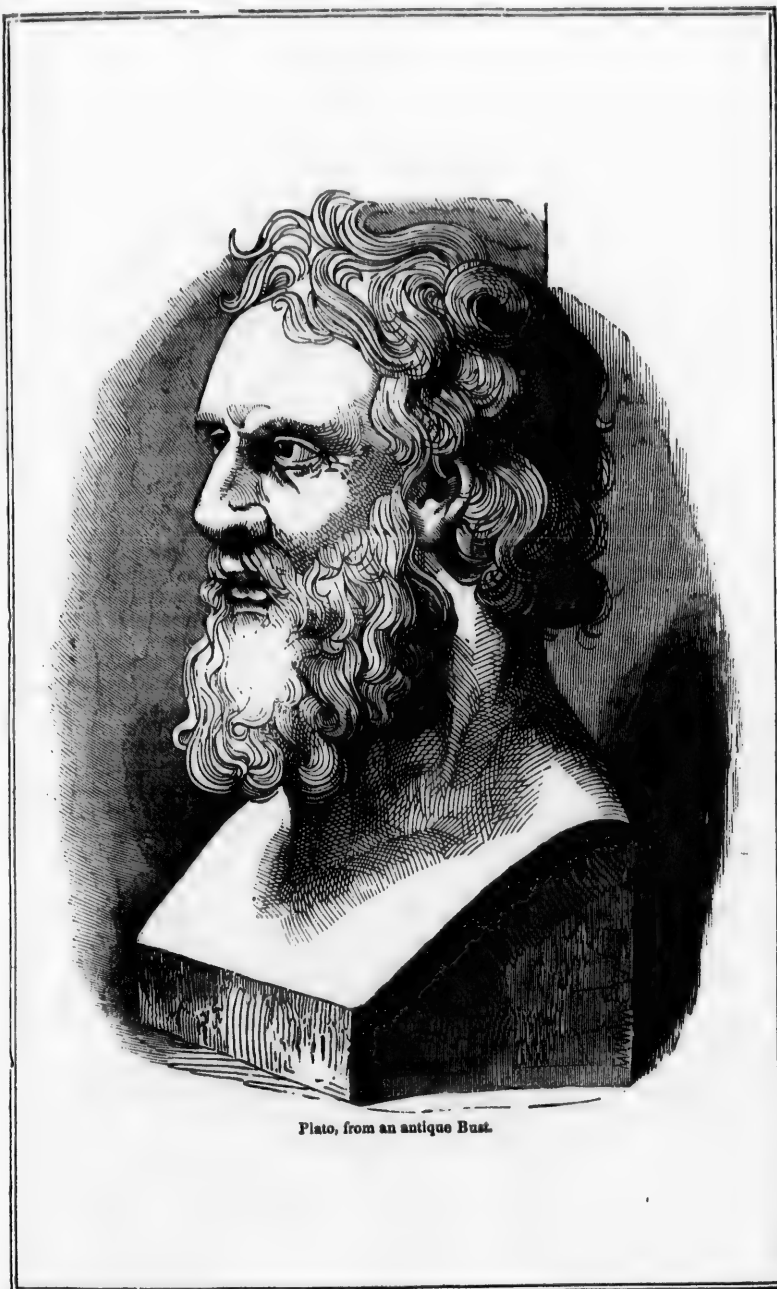


PLATO, the biographer and pupil of Socrates, the earliest Greek philosopher whose writings are devoted to the advancement of moral and metaphysical science, was the son of Athenian parents, but born in the island of Egina, B. C. 429. His descent was illustrious,

being derived on the mother's side from the philosopher and lawgiver Solon, and on the father's from the ancient kings of Athens. In after-times the flattery of his admirers, not content with this distinguished genealogy, ascribed to him divine honors. Apollo, the patron deity of letters, was reported to have been the author of his being. His sweetness of discourse was foreshown by the gathering of a swarm of bees upon his lips in the cradle, and Socrates, the night before he first saw Plato, was warned of the excellences of his future pupil by a vision of a cygnet, which as it sat on his knees, suddenly became full fledged, and flew away with a melodious cry. We may be excused for repeating these fables, since the scarcity of authentic details concerning the life and history of the philosopher will reduce this paper to very narrow bounds.

The name first given to him was Aristocles, that of Plato, under which he became celebrated, is derived from the Greek adjective which means broad. The time and the reason of this change of name are both uncertain: it has been accounted for by his breadth and fulness of expression, by his remarkable width of forehead, and by other etymologies more fanciful than convincing. His manly beauty has been perpetuated in the bust from which the above sketch is taken, and his bodily vigor, and successful practice of the gymnastic exercises enjoined by custom upon the Greek youth of all ranks, and to which he himself in after-life attached great importance, are indicated by the report that he contended for the prize in wrestling at two of the great national festivals, the Pythian and the Isthmian games. Painting and poetry he also cultivated; the latter with zeal certainly, and probably not without success, for he produced an epic poem, and a drama which was brought on the stage; but he burnt his poems on becoming acquainted with Socrates, to whom he was introduced when he was about twenty years of age. During ten years he continued to be the philosopher's pupil and constant attendant; during his trial, he came forward in his defence, and offered to become his surety for the payment of such fine as might be imposed. Faithful to the last,

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Plato, from an antique Bust.

he witnessed the closing scene of that great man's life, of which he has given a beautiful and affecting description at the close of the dialogue entitled "Phædon," which has for its subject the immortality of the soul, and has ever been regarded as the ablest effort of human intellect, unassisted by revelation, to prove that there is a future existence after death. This celebrated piece professes to record the conversation of Socrates upon the day of his execution. In such circumstances, the discourse naturally turned upon those expectations of the future, in reliance on which he faced death with perfect tranquillity; and the profound philosophy and lofty eloquence of this part of the composition, are relieved and set off by the dramatic interest and pathos of the concluding narrative. The "Phædon" is said to have been Cato's study immediately before he put an end to his life at Utica, a circumstance of which Addison has made use to introduce the most elaborately-wrought passage in his well-known tragedy.

After his master's death, Plato retired from Athens, and led a wandering life, frequenting the schools of the most eminent philosophers whithersoever he went. Megara was his first place of abode, and here, while the mournful details were still fresh in his memory, he is believed to have written the "Phædon," with its companion pieces, the "Crito," and the "Defence of Socrates." Thence he went to Cyrene, and from Cyrene to Italy, where he spent a considerable time in studying the rival systems of philosophy founded by Pythagoras and Heraclitus, both of which, to a certain extent, and with certain modifications, he combined and taught when he himself became the founder of a new sect. From Italy he travelled to Egypt, in elder times the fountain and seat of science. Here, according to some authors, he was admitted by the priests to a knowledge of those mysteries, of which they only had the key, and derived from them the most profound doctrines of his philosophy. This statement, however, is not confirmed by the most credible authors, and Plato himself speaks in disparaging terms of Egyptian science in his day. Cicero attributes his visit to Egypt

to the desire of improving his knowledge of astronomy, which, with others of the mathematical sciences, still flourished there, and simple curiosity would furnish a sufficient motive for travelling to a country so remarkable and closely connected with the early history of art and religion in Greece. It has been supposed that in Egypt Plato became acquainted with the Hebrew scriptures, but there appears to be no well-founded ground for this belief, which probably arose out of the clearness of his views of a future existence as compared with those of antecedent philosophers.

Upon his return to Athens, B. C. 395, Plato took up his residence adjoining, or within the precincts of, a public garden named Academia, from Academus, who bequeathed it for the use of the people. Within this garden he opened a school for instruction in the arts of disputation and philosophy; and the word "Academy," has hence obtained such celebrity, as not only to denote the school and sect of which he was the founder, but to have become in modern languages a general title for any place of education. His speculations, however, were varied by the duties of active life, for it is on record that he served as a soldier in three battles. In B. C. 389, he visited Sicily, attracted by the curiosities, natural and artificial, of that remarkable island, in which the elder Dionysius, the celebrated tyrant of Syracuse, then bore the chief sway. The despot, according to Diogenes Laertius, took offence at Plato's freedom of spirit and sold him into slavery, from which however he was soon redeemed by his friends.

Honored and beloved, with a reputation established throughout Greece as a statesman and lawgiver, Plato declined through life to take any active part in political affairs, though, as has been intimated, he did not shun those active duties which devolved on him in common with all other citizens. A life so passed, in the pursuit and teaching of abstract truth, affords little material for the biographer; but it is not to be omitted that Aristotle, his great rival in fame and influence, was Plato's pupil from the age of eighteen, during the long period of twenty years. Plato died aged about 81, B. C. 347.



Portrait of Sir Isaac Newton.

WOOLSTHORPE MANOR-HOUSE.



HE birthplace of Sir Isaac Newton, known as the Woolsthorpe manor-house, is situated in a valley in the parish of Colsterworth, near Grant-ham, in Lincolnshire, at the distance of about 103 miles from London. The building itself presents nothing to attract attention; but as the house in which one of the best men and one of the greatest philosophers of modern times first saw the light, it will be viewed with affectionate reverence by all who esteem high genius and true nobleness of heart.

It is pleasant to know that the vast and penetrating mind which could dictate such a work as the "Principia" was once an inhabitant of an insignificant cottage. It is pleasant to know that the author of such a theory as that developed in his great work, with all its dependent circumstan-

ces, was a mere man with all the cravings and affections of mortality; although there is something so vast and majestic in the conceptions embodied in the "Principia," that we imagine they could only be the productions of a god-like being, of an immortal and unerring mind! Yet, though his fame among men will last while the science he so enriched shall endure, there was nothing in his personal appearance or mode of life to distinguish him from his fellow-men with minds too small to compass his ideas even when developed with his own simplicity. Yes, the immortal Newton lived like other men—he ate, and drank, and slept; his dwelling was a cottage; his observatory his own garden; and here in the solitude of Woolsthorpe did he contemplate the glorious works of his Creator, and imagine the means by which the harmony of the universe is maintained.

The genius of Newton is now acknowledged by the whole scientific world; modern discoveries have altered and improved many sciences but imperfectly

known in the days of Newton, and much has been effected in clearing the obscure departments of the study to which he directed his principal attention; but not all the efforts of modern philosophers, assisted by the mechanical skill of modern days, have been sufficient to darken the fame of Newton or to eclipse any of his discoveries.

The private habits of this great man, as of many others, are not so generally known; we shall therefore present so much information on this head as we have been able to collect. Although the most trifling particulars in the life of a celebrated character are of interest to his admirers, they are not considered of sufficient importance at the time they occur to deserve to be recorded for the information of future ages; thus it is that we know so little of the motives which have actuated so many men in actions for which they are praised or blamed by posterity without sufficient cause; and in the present instance we have to regret that particulars of this nature are extremely scanty.

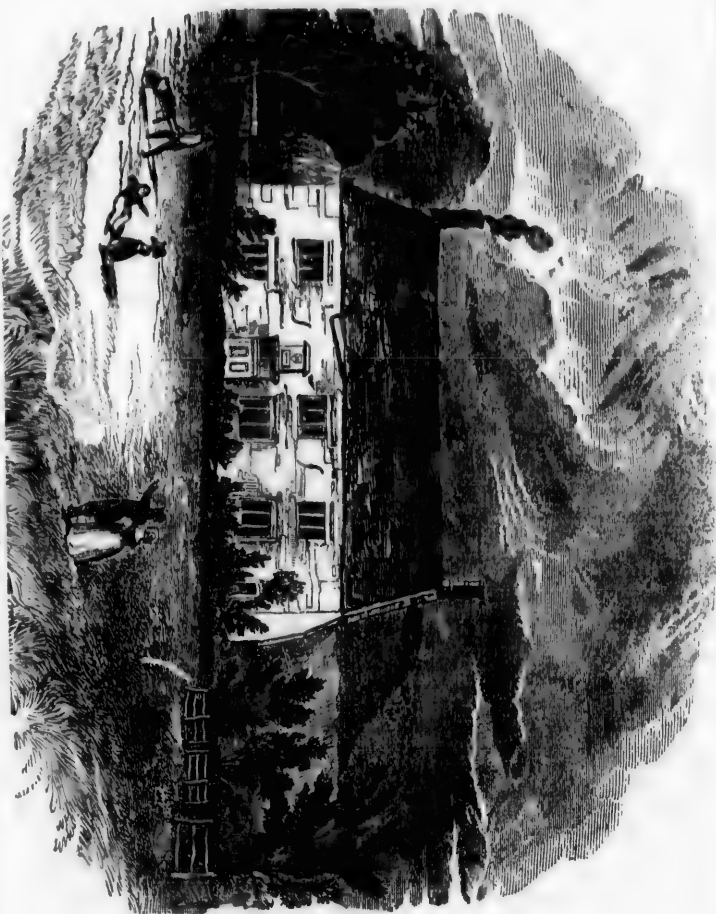
The Newtons appear to have located themselves at Woolsthorpe as early as the year 1561, having come thither from Westby, in Lincolnshire. It has been said that the family derived its name originally from Newtown, in Lancashire; but it seems probable, from inquiries which have been made by the biographers of Sir Isaac, acting on some hints afforded by himself, that he was descended from a Scotch family of that name in East Lothian. The genealogy of the philosopher is however involved in considerable obscurity, and he could not himself trace his descent with certainty beyond his grandfather Robert Newton, who, in 1623, became possessed of the manor-house of Woolsthorpe, which had been bequeathed to him by Robert Underwood.

Sir Isaac Newton was born on Christmas day, 1642, O. S., nearly three months after the death of his father. He was an extremely weakly child, and for some time it was thought he would not live; he is also said to have been so small for many days after his birth that "he might have been put into a quart pot." He did at last spring up, and as he grew, gradually mastered the natural weakness of his con-

stitution. The rudiments of his education were received at two small day-schools at Skillington and Stoke, in the immediate vicinity of his home, where he remained till he was twelve years of age, when he was removed to the great school at Grantham. Here he showed considerable quickness at his studies, and manifested a strong disposition for mechanics, in which he missed no opportunity for acquiring information, either theoretically or of a practical nature. He amused himself with making models of windmills, water-clocks, and other scientific toys, all of which he executed with considerable neatness and accuracy. Some of the sun-dials made by his own hand are still shown in the room used by him as a study at Woolsthorpe. Although his natural quickness of apprehension enabled him easily to master the exercises of the school, it does not appear that he was particularly partial to learning or forward in his studies. Indeed it is probable that it is to one of those accidental circumstances to which so many great events are ascribable, that we may partly attribute his future eminence. He used to relate that he was always very negligent at school, and very low in his class, until he happened to be insulted one day by a boy above him, when he determined to be revenged, not only by giving his superior a sound thrashing (which was promptly administered on the spot), but by the more noble method of superseding him in his studies. This determination gave a new bent to his character, and from that day he continued rising in the school till he was head boy. When he left Grantham school, it was determined by his mother, after great deliberation, and at the earnest solicitation of his uncle, who had observed indications of his great genius, to send him to Cambridge, whither he repaired in 1660, being admitted of Trinity College on June 5, in that year. Here he remained several years, applying himself closely to the acquisition of the more abstruse branches of knowledge, to the dissemination of which, means are appropriated in that university. The fruits of his studies were not made public until a very late period, and even then, only at the persuasions of his friends, and against his own well-known desire.

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Sir Isaac Newton's Birthplace.



Yet it is remarkable that nearly all the theories and opinions which have ranked his name first among modern philosophers, were conceived, and the demonstration of them considerably advanced, while he was yet a young man.

In 1665 he left Cambridge for a short time, in consequence of the plague, which in that year committed such ravages in all the great towns and cities throughout Europe, and retired to his house at Woolsthorpe (having inherited it in 1663 from his mother), where he passed the autumn of that year.

It was on this occasion, and while sitting in the garden, that the falling of an apple from a tree led to that train of thought which ultimately produced his beautiful theory of gravitation. At least such is the substance of a popular tradition, and it is so pretty that it would be cruel to deny the fact, although there are several circumstances which might lead us to doubt it.

In person Sir Isaac Newton was of a middle stature, rather inclining to corpulency in his latter years. He had a benignant expression of countenance, to the effect of which his hair, white as silver, greatly contributed. He was blessed with a strong constitution, and to his last illness had the bloom of health mantling in his cheeks.

In company Sir Isaac was very reserved, and particularly absent in mind. Of the latter failing, excusable however in a man whose attention was occupied with such abstruse subjects, there are many pleasant stories told, one of the best of which, and perhaps the only authentic one, is that given by Dr. Stukeley, who relates that after waiting at Sir Isaac's house for a considerable time without being able to see him, he was induced to demolish a fowl prepared for the philosopher's dinner. When Sir Isaac entered he appeared astonished to find the fowl gone, and exclaimed to his visitor, "You see, doctor, how very absent we philosophers are; I really imagined I had not yet dined!" Indeed he would much rather sit down to solve a geometrical problem, than to discuss the most sumptuous dinner; and he would do one with as much celerity as the other.

When Leibnitz proposed a problem in-

tended to puzzle the philosophers of all Europe, Sir Isaac Newton solved it within six hours after he had received it; and previously he had returned an answer in as short a time to one proposed by Bernoulli, for the solution of which Leibnitz had requested an extension to twelve months of the period of six months originally assigned.

After the death of Sir Isaac, John Newton, the heir-at-law, succeeded to the manor and estates; but in 1732 they were sold to Edmund Turner, Esq., in whose family they still remain. The house was repaired in 1798, and a marble tablet fixed in the room where Newton was born, with these lines by Pope:—

"Nature and Nature's laws lay hid in night;
God said, 'Let Newton be,' and all was light."

HISTORY OF THE FIREPLACE.



THE history of the fireside may be said to commence in the dark ages; for it extends back to a time when man was unacquainted with the existence of fire. The early records of nearly all nations refer to a time when that element was unknown. Indeed instances of such ignorance have been met with in comparatively modern times. When Magellan visited the Marian islands in 1521, the natives believed themselves to be the only people in the world. They were without everything which we regard as necessities, and in total ignorance of fire. Several of their huts being consumed, they at first considered the flame to be a kind of animal that attached itself to the wood, and fed upon it. Some who approached too near, being scorched, communicated their terror to the rest, who durst only look upon it at a distance. They were afraid, they said, that the terrible animal would bite them, or wound them with its violent breathing. They speedily learned to use fire with as much address as Europeans. Few historical facts, therefore, are less doubtful than

that man was once without means of artificial heat. A Phœnician tradition attributed its discovery to a hunter observing a conflagration that had been excited in a forest by the attrition of some trees during a storm. Another tradition varies the account: in the winter season, Vulcan the king, coming to a tree on the mountains that had been fired by a thunderbolt, was cheered by its heat, and adding more wood to preserve it, he invited his companions to share in his pleasure, and thereupon claimed to be the inventor of flame. Fire once discovered, the primeval savages, though at first alarmed, gradually felt its blessed influence, and it is thus that tradition gives us an account of the earliest fireside, for around the embers of the burning trees men first learned to herd, "and as the intercourse continued under the bond of the common enjoyment, the incoherent sounds by which they expressed their emotions were by degrees roughly cast into the elements of speech; thus the discovery of fire gave rise to the first social meeting of mankind, to the formation of language, to their ultimate union, and to all the wonders of subsequent civilization." The Chinese historians attribute the earliest power of producing fire at will, by the friction of two pieces of dried wood, to Souigine, one of their first kings. This power once known, the nomadic races in all countries ever availed themselves of it; though a fire made of dried wood or grass in the open air, or in a rude tent, was their sole provision against cold for many ages.

Increased intelligence induced mankind to seek for greater warmth under substantial cover, and the first houses they took to were ready built, being chiefly caves. In the middle of these they made fires, in spite of the smoke, for which there was no other outlet than the hole by which the inhabitants came in and out. The same rude method was continued even when men learnt to build houses, and to congregate in cities, only they made a hole in the roof to let the smoke out, exactly like the Laplanders and some of the Irish at the present day.

During the last few years, public attention has been laudably directed to the defective means which still exist for warm-

ing and ventilating houses. Although we have arrived at a high state of civilization in some respects, yet the method still in use for producing an artificial climate in modern habitations, is perhaps more primitive and defective than any of our domestic contrivances.

IMPROVVISATORI.



N all parts of Italy, and more particularly in the Tuscan province, there has prevailed from time immemorial a peculiar and highly interesting exhibition of intellectual power, the delivery of extempore poems, by a class of persons called

in the language of the country the improvvisatori. Something of the same kind may be found in other parts of the world, but nowhere so fully developed. In Portugal the peasants may still be heard in the summer evenings singing improvisatized songs to the accompaniment of their guitars, but their strains are of a very humble unambitious character.

Through Tuscany, the custom of reciting verses has for ages been the constant and most favorite amusement of villagers and country inhabitants. At some times the subject is a trial of wit between two peasants; on other occasions a lover addresses his mistress in a poetical oration, expressing his passion by such images as his uncultivated fancy suggests, and endeavoring to amuse and engage her by the liveliest sallies of humor. These recitations, in which the eclogues of Theocritus are realized, are delivered in a tone of voice between speaking and singing, and are accompanied with the constant motion of one hand, as if to measure the time and regulate the harmony; but they have an additional charm from the simplicity of the country dialect, which abounds with phrases highly natural and appropriate, though incompatible with the precision of a regular language.

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The Neapolitan Improvisator

ly found among the higher and better educated classes. The most flourishing period of the art is considered to have been during the pontificate of Leo X., who not only encouraged its professors; but delighted in occasionally joining them in their exercises of skill. The ambition of the improvisatori at that time was to exhibit their powers in Latin verse. Andrea Marone eclipsed all competitors in this way. His recitals were accompanied by the music of his viol, and as he proceeded he seemed continually to improve in facility, elegance, enthusiasm, and invention. The fire of his eyes, the expression of his countenance, the rising of his veins, all bespoke the emotions with which he was agitated, and kept his hearers in suspense and astonishment.

Perhaps the extraordinary faculties possessed by the improvisatori were never more strikingly evidenced than in the exhibitions of Signor Sgricci, who died two or three years since. He not only recited poems of a decidedly superior character on the impulse of the moment, but actually before the eyes of an audience, on receiving a subject (and what that would be he could not possibly have known beforehand), framed the dramatic persons of a play, the plot, the contrasts of character, and flow of story; then proceeded, act by act, and scene by scene, to pour forth the unpremeditated effusions of a rich fancy and warm imagination, and in short created a play, an entire five-act drama, in the mere time required for its utterance!

Among the more curious of such exhibitions Mr. Rose speaks of seeing a man to whom three subjects for sonnets were proposed: one of which was Noah issuing from the Ark; another, the death of Cæsar; the third, the wedding of Pantaloon. These were to be declaimed interlacedly; that is, a piece of Noah, then a piece of Cæsar, and then a piece of Pantaloon: returning after that for another piece of Noah, and so on. Nor were these difficulties enough; he was also to introduce a particular verse specified by one of the audiences at a particular place in each sonnet. He accomplished this task in ten minutes.

The different writers who have spoken of this subject account for the apparently

marvellous powers of the improvisatori by the exceeding facility of the language, the comparative laxity of its poetical rules, and the mechanical skill of introducing similes and thoughts previously prepared. The first two points must undoubtedly greatly decrease the difficulty of making extempore verses; the last, we think, not only inadequate for the object proposed, but to be altogether a mistake. The character of the compositions produced is not of the patchwork kind here indicated. The truth lies deeper: the exceeding vividness of mind that all must acknowledge to be required after any or every preparation, to carry along a dramatic fable through five acts, and by its means command the sympathies and admiration of an audience, must be sufficient in itself, without such preparation as has been supposed, and which is all that the circumstances allow. In one word, the improvisatori are really inspired poets; generally perhaps of weak, but always of ready and most excitable powers, whose emotion, being genuine and poetically expressed, naturally induces a corresponding state of feeling in their auditors. The practice is now, we believe, on the decline; the more the pity, unless something better takes its place in the hearts and minds of the people who have so long cherished it, and enjoyed by its means so many a harmless and happy hour.

FALSEHOOD.



LL careful students of human nature must have remarked the indifference with which the majority of mankind are apt to regard even the most important truths, when addressed to them in abstract or general terms. We hold the pulpit in sincere respect, and concur cheerfully in the eulogy which the gentle and amiable Cowper has passed upon it. Still, with all deference to the many good and

gifted men who fill it, it is possible that, as an instrument of doing good, it might, like most others, be somewhat improved. We think, for example, that, in the delineation of particular virtues or vices, there might be, with advantage, a little more going into detail—a condescending upon the precise shapes and phases under which these may be found in every-day life. The great majority of men feel comparatively at ease when they hear this and the other attribute of evil spoken of in vague and indefinite terms. Speakers of the class alluded to, however well-meaning, do, we fear, far less good than they may suppose. Unless there be some speciality of application, some effort to present a life-like portrait of the evil assailed, it is very far from being unlikely, that, in the audience, not a few may be committing the very sin, even while the preacher is exposing it. He may be denouncing avarice, while, in yon nook, the avaricious man is telling over his gold, and laying fresh schemes of aggrandizement. He may be denouncing malignity; but the malign, even while the tones are falling on their ears, are plotting new scandals to propagate as soon as they have crossed the church-door. He may inveigh against envy; but the eye of the envious is meanwhile fixed on some part of the dress, or property, or good fortune of their neighbor in the next pew.

But, without saying more about the pulpit—and where there is so much to praise we are loath even to insinuate defect or blame—we hope the pages of this magazine will not be considered as trenching upon its sacred prerogatives should they occasionally deal out a few kindly hints respecting prevailing vices, or those moral graces so essential to our welfare and happiness. To aid in the smallest degree in correcting the faults of mankind, or strengthening their virtues, is no mean honor; and perhaps we may do some little good in this way, by an article, now and then, like that we propose at present to write, about one vice too prevalent, we grieve to say, in every circle of society—we mean *falsifying*.

The forms in which this vice may be met with are more numerous than perhaps most people imagine. There are falsifiers

—for we drop the harsher and more vulgar term—so young that they can with difficulty lisp the syllables in which they vend their untruths. There are others so old that their tongues almost deny them utterance when they propagate their slanders. There are others so fair, that, when one hears them circulating their calumnies, he can not help recalling a certain proverb about a “jewel of gold in a swine’s snout.” The beggar tells a tissue of falsehoods when craving alms at your door; and some would not care to say that courtier and falsifier are all but convertible terms. In point of fact, it is not easy to tell, even when we would—to borrow the legal phrase—the truth, the whole truth, and nothing but the truth. The statement, without suppression or exaggeration, without a shade to suit the views of him who utters it, is not, kind reader, a commodity you are every day meeting with. The motives to falsehood are numerous; and the forms in which this vice may be found among men are consequently so too. There is one whom, in the absence of a better term, we may call the *silent falsifier*. There may be more wicked ones than he, but assuredly there is none meaner: he is an ungallant and ungenerous soul; he has a paltry, cringing heart in his bosom; there is nothing noble and magnanimous about him; he is deficient in all great qualities; he is not a brother to his race. Fie on him! rather than provoke the frown of some one whose favor might be of service to him, the wretch will hear, without defending them, his old father defamed, or shame cast on the gray hairs of her who bore him. Your mute falsifiers do a world of mischief in their own petty way. They hear your character assailed; circumstances stated to your disadvantage, which they well know to be an utter perversion of the truth; impressions conveyed to one or more listeners which they are quite aware are both false and injurious; a word from them might silence the detractor; but no; they are either glad to hear you defamed, or it is their interest that your reputation should be suspected, or they tremble to incur the displeasure of the party traducing you, and they are as quiet, as immoveably taciturn, as if they had been born dumb. Who says that

these men are not falsifiers? Who refuses our right to class them with the vile herd of slanderers? It is a nasty heresy that a man may surely hold his tongue if he pleases. Proverbially, silence and assent are the same thing. There are times when not to speak out in defence of our opinions, is to prove recreant to them; and so, too, there are times when not to speak out in defence of our friend is foully and ignobly to slander him—to rob him of that good name, compared with which, Shakspeare truly says, a man's purse is but trash. Your silent falsifiers go further at times. There are many ways in which they evince how willing they are to wound, though afraid to strike. Heaven save us from the men who shake the head, shrug the shoulders, give the piteous whine, or put on the rueful aspect—all of which, when the fabrication is going round, are but different ways of saying, *it is very bad, and but too true!*

The *vain falsifiers* form a numerous class. It is easier to keep one's temper serene when speaking of this class; for, except when their own claims happen to come into competition with those of others—which, however, is frequently the case—they are not addicted to detraction. The truth is, they are rather fond of the idea that all the world are rich, and respectable, and happy, were it for no other reason than this, that they feel it rather creditable to themselves that they belong to so excellent a community. As for traducing their neighbors, if you take care not to push the claims of the latter too eagerly, so as to bring them into close rivalry with their own, they will scarcely say a bad word against any one, finding that to be a sufficiently fertile topic on which Lord Byron has shrewdly remarked, most men are fluent, none agreeable—we mean, self. The vain, taken as a class at least, have too much to say about themselves to have leisure for discussing the character of their acquaintances; but their besetting sin leads to falsehood of another kind. Excessive vanity and the truth-telling habit can scarcely be found in the same individual. Every conceited person is, we may almost say, of necessity a falsifier. His ridiculous fictions are just the fuel to his vain imaginations; his

lies, if we may so express ourselves, are so many imps going about seeking what they can devour as provender to his voracious vanity. There are few who are not in some degree censurable on this score. Whose conscience does not accuse him with having occasionally perverted the truth, that he might be thought richer, more talented, or more benevolent, than he really is? But while most men err thus in some measure, there are not a few who go to great extremes. Their vanity so beguiles them into dissimulation and falsehood that they come to lose all sense of the distinction between what is truth and what is not. Listen to them in the social circle. How inflated their tone! How extravagant their statements! How they deal in superlatives! What playthings they make of themselves to the discerning and quizzical! Do they talk of their strength? you would fancy they could heave mountains. Of their swiftness of foot? they could vie with the mountain roe. Of their talents? you feel that you have the honor to sit side by side with another Milton or another Locke. Of their wealth? they are a match for the Rothschilds. Of their connexions? who ever heard of such prosperous mortals? They are all people of fashion and fortune—all above dependence—all shining in the upper circles—their carriage just left the door as you entered—of course you have heard of the immense accession to their income they got t'other day!

Addison somewhere remarks, that if there be anything which makes human nature appear ridiculous to beings of superior faculties, it must be pride, well aware as they are of the vanity of those little supernumerary advantages on which men plume themselves. But one does not need to be an angel to be astonished and diverted at the silly self-conceit, so fruitful in falsehood, which has been described. The violation of truth, too, in this instance, is all the worse that it panders to another vice, namely, extravagant self-appreciation. It is a wicked daughter feeding a bad mother.

The *avaricious falsifiers* are anything but few in number. It seems they were not unknown in the days of Solomon. The wise man sketches them thus, with his

graphic pen: "It is naught, it is naught, saith the buyer; but when he is gone his way, then he boasteth." They are plentiful in our times too. They sacrifice truth at the shrine of worldly aggrandizement; they tell lies to fill their pockets; contract heavy guilt, that, like Whang the miller, they may have the exquisite pleasure of thrusting their hands into a heap of gold up to the elbow. There were, in the time of the king we have named, the seller, who, when disposing of his goods, greatly overpraised them; and the purchaser, who, to get them at a lower price, did exactly the reverse. Thus falsehood went on, out in the market, and on both sides of the counter—and so it does still. Oh! but the maxim is current in the world, that a man wont thrive now-a-days if he be sternly honest and unswerving in his regard to truth. Now, there is no use in making the world worse than it is. Rich trades there are, no doubt: they are the exception, not the rule, however; and were there a window in their bosoms, and were you, gentle reader, allowed to look through it, you would pity them, and call them "poor indeed." The shortest and easiest road to wealth is clearly that pointed out by honesty and worth. Is there a merchant in your community who is known to give his candid opinion of the quality of his goods—known neither to over-praise nor over-charge—who gives the same article at the same price to the injudicious and skilful alike? Be sure, other things being equal, that man is a thriving man; his shop is frequented by all who wish to deal fairly; his reputation is his bank. And so is it in every department of life. There is, if men would believe it, no need for lying; the arrangements of Providence are not such, that if a man be truthful and honest he must needs starve, and that the deepest rogue will infallibly be the most prosperous.

But of all kinds of falsifiers the *malicious* is the most detestable. A poet of our own day has detigned slander the "foulest whelp of sin." A malicious falsifier—that is, one who invents and propagates lies, with the view of injuring the peace, prosperity, or honor of another—is almost the biggest reproach to his species we know of. He looks with a jaundiced eye

on all around him; his weal is the woe of others; he "sleeps not except he has done mischief;" he lives upon the calamities and misfortunes of mankind; worth, fame, talent, if possessed by those around him, only serve to provoke his resentment toward them, and call forth his slanders. He is a moral assassin; and, if character be more sacred than life, the malign trader of it is every way as loathsome a being as he who sheds the blood of the innocent. We stop not to enlarge this picture. It is a sickening thing to investigate deformity. The poet we have just quoted has said with truth and power:—

"The man,
In whom this spirit entered was undone;
His tongue was set on fire of hell; his heart
Was black as death."

There are other forms of this prevailing evil on which we do not dwell at present. Those we have sketched are perhaps the most common. May we give a kindly hint or two to those who happen to glance at this page? Have a passionate attachment to the truth. Never cross its sacred line to advance your interests, gratify your vanity, or injure the man you love least. Check, in all over whom you have influence, the slightest symptom of the vice in question. The habitual falsifier will not escape detection even in this life, and, when detected, he will be held in universal contempt. Shun paltry equivocation on the one hand, and inflated exaggeration on the other. Forget not that it is the intention to deceive that makes the lie, and not the mere phraseology in which it may be couched. The truth-telling habit gives to one so sunny a bosom, and earns for him, eventually, so fair a reputation, that, irrespective of higher motives, it is well worth being cultivated. Crabbe's "noble peasant," Isaac Ashford, was a model in this respect:—

"Of no man's presence Isaac felt afraid,
At no man's question Isaac looked dismayed;
Shame knew him not; he dreaded no disgrace;
Truth, simple truth, was written on his face."

THERE are two thousand five hundred known species of fishes; forty-four thousand of insects; seven hundred of reptiles; four thousand of birds; and five thousand of mamiferous animals.

PROGRESS OF AFRICAN DISCOVERY.



N the time of Herodotus, and long afterward, the general opinion was that Africa did not extend so far south as the equatorial line. There existed, however, a tradition that Africa had been circumnavigated by the Phenicians about six centuries before the Christian era; but if the southern promontory of Africa had really been reached, it is difficult to conceive how so erroneous an impression could have prevailed as to the extent of the continent. It is, therefore, most probable that such a voyage had never succeeded; and, indeed, the circumstances under which it was prosecuted, according to the accounts which have come down to us, only add an additional feature of improbability to the story. Turning to modern times, we find, at the commencement of the fifteenth century, that Europeans were only acquainted with that portion of the western coast of Africa which extends from the straits of Gibraltar to Cape Nun, a line of coast not exceeding six hundred miles in length. The Portuguese had the honor of extending this limited acquaintance with the outline of the African continent. Their zeal for discovery in this direction became truly a national passion, and the sovereigns and princes of Portugal prosecuted this object with singular enthusiasm. By the year 1471 the Portuguese navigators had advanced 2½° south of the line. In 1484, Diego Cam reached 22° south latitude. The next navigator, Bartholomew Diaz, was commanded to pursue his course southward until he should reach the extremity of Africa, and to him belongs the honor of discovering the Cape of Good Hope, the name given to it at the time by the king of Portugal, though Diaz had named it Cabo Tormentoso (the Cape of Tempests). The Cape of Good Hope was at first frequently called the Lion of the Sea, and also the Head of Africa. In 1497, Vasco de Gama set forth with the intention of reaching India by sailing round the Cape of Good Hope. After doubling

the cape, he pursued his course along the eastern coast of Africa, and then stretched across the ocean to India. The Portuguese had now ascertained the general outline of Africa, and the position of many of the principal rivers and highlands. With the exception of a portion of the coast from the straits of Bab el Mandeb to Mukdeesha, situated in 3° north latitude, the whole of the coast had been traced by the Portuguese, and their zeal and enthusiasm, which had at one period been treated with ridicule, were at length triumphantly rewarded, about four years before Columbus had achieved his great discovery, which, with that of Vasco de Gama, amply repaid a century of speculative enterprise. This interesting combination of events had a sensible effect upon the general mind of Europe. The Portuguese soon formed settlements in Africa, and began to acquire a knowledge of the interior of the country. They were followed by the French, and afterward by the English and the Dutch. It is chiefly within the last fifty years that discoveries in the interior of Africa have been perseveringly and systematically prosecuted. In 1788 a society was established in London with the design of encouraging men of enterprise to explore the African continent. John Ledyard, an American, was the first person selected by the African association for this task, and he set out in 1788 with the intention of traversing the widest part of the continent from east to west, in the supposed latitude of the river Niger. Unfortunately he was seized at Cairo with a fever, of which he died. He possessed few scientific acquirements; but his vigor and powers of endurance, mental and bodily, his indifference to pain, hardship, and fatigue, would have rendered him an admirable geographical pioneer. "I have known," he said, shortly before leaving England for the last time, "hunger and nakedness to the utmost extremity of human suffering; I have known what it is to have food given as charity to a madman, and have at times been obliged to shelter myself under the miseries of that character to avoid a heavier calamity. My distresses have been greater than I have ever owned, or ever will own, to any man. Such evils are terrible to bear, but they

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never yet had the power to turn me from my purpose." Such was the indomitable energy of this man, the first of a long list of victims in the cause of African discovery. Mr. Lucas, who was despatched by the association to supply the place of Ledyard, was compelled to return home in consequence of several of the countries through which he would have to pass being engaged in hostilities. In 1790, Major Houghton, an officer who was acquainted with the customs of the Moors and Negroes, proceeded to Africa under the auspices of the association, and had made considerable progress in the interior, when, after having been treacherously plundered and left in the desert, where he endured severe privations, he reached Jarra, and died there in September, 1791, it being strongly suspected that he was murdered. The next individual on whom the association fixed was Mungo Park, who proceeded to the river Gambia in 1795, and thence set out into the interior. The great object accomplished during his journey was that of successfully exploring the banks of the Niger, which had previously been considered identical with the river Senegal. In 1804, Park set out upon his second journey, which was undertaken at the expense of the government. The plan of former travellers had been to accompany the caravans from one part of the country to another; but in this expedition Park required a party of thirty-six Europeans, six of whom were to be seamen and the remainder soldiers, it being his intention, on reaching the Niger, to build two vessels, and to follow with his party the course of the river. If the Congo and the Niger were the same stream, as was then supposed, he anticipated little difficulty in his enterprise; but if, as was also maintained, the Niger terminated in swamps and morasses, many hardships and dangers were expected in their subsequent progress. Park at length reached the Niger, accompanied only by seven of his party, all of whom were in a state of great weakness from the effects of the climate. They built one vessel, and on the 17th of November, 1805, were ready to embark on the river, previous to which Park sent despatches to England. His party was now reduced to five, his

brother-in-law having died a few days before. Park's spirit, however, remained undaunted. "Though all the Europeans who are with me should die," said he, in his last letters to England, "and though I myself were half dead, I would still persevere; and if I could not succeed in the object of my journey, I would at least die in the Niger." He embarked, therefore, with the intention of sailing down the river to its mouth, wherever that might be; but after passing Timbuctoo and several other cities, he was killed in the Niger, at a place called Boussa, a short distance below Yaouri. No part of his journal after he left Sansanding has ever been recovered.

In 1797 the African association had engaged Mr. Hornemann, a German, who left Cairo in September, 1798, with the intention of carrying into effect the objects of the association by proceeding as far southward and westward as he could get. In his last despatches he expressed himself confident in being able to succeed in reaching a greater distance into the interior than any other European traveller; but after reaching Bornou, no certain intelligence was ever afterward heard concerning him. Mr. Hornemann learned many particulars which had not before been known in Europe respecting the countries to the east of Timbuctoo. Mr. Nicholls, who was next engaged, arrived in the gulf of Benin in November, 1804, and died soon afterward of the fever of the country. Another German, Boentzen, was next sent to Africa. He had bestowed extraordinary pains in making himself acquainted with the prevailing language, and, throwing off his costume, proceeded in the character of a Mussulman, but unhappily was murdered by his guides on the way to Soudan. The last traveller sent out by the association was Burckhardt, a Swiss. He spent several years in acquiring a knowledge of the language and customs of the people whom he intended to visit, and, like Mr. Boentzen, assumed the characteristics of a Mussulman. He died at Cairo in 1817, his travels having been chiefly confined to the Abyssinian countries.

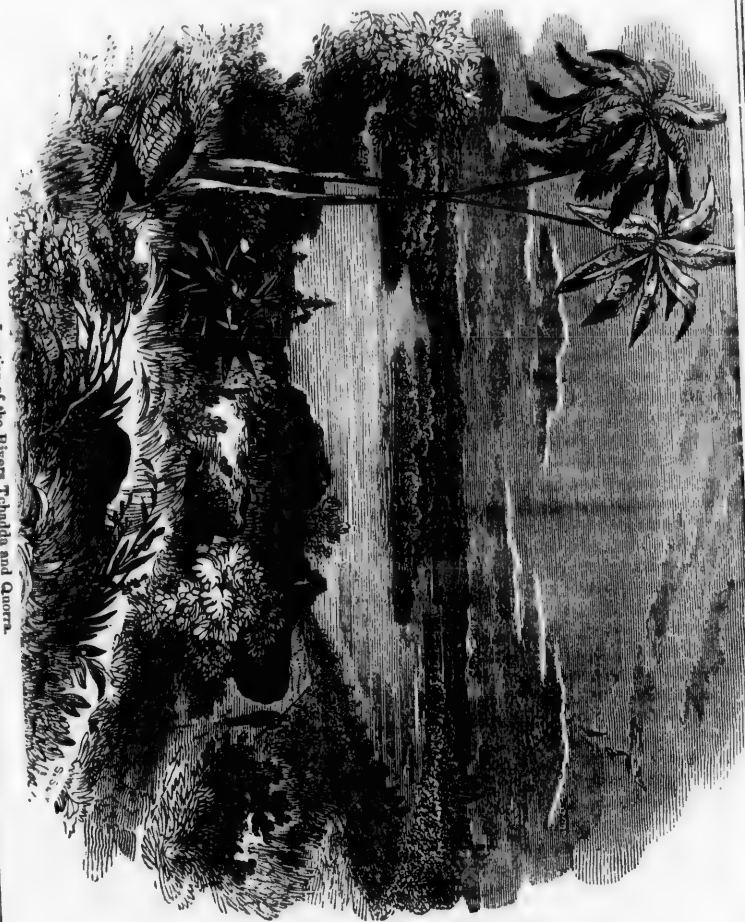
In 1816 an expedition was sent out by the government, under the command of Captain Tuckey, to the river Congo, under

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the idea, in which Park had coincided, that it and the Niger were the same river. Captain Tuckey ascended the Congo for about 280 miles. At the same time, Major Peddie, and, after his death, Captain Campbell, proceeded from the mouth of the river Senegal as far as Kakundy. In 1817, Mr. Bowdich explored the countries adjoining Cape Coast Castle. In 1820, Mr. Jackson communicated an interesting account of the territories of Timbuctoo and Houssa, from details which he had collected from a Mussulman merchant. In 1819, and in 1821, the expeditions of Messrs. Ritchie and Lyon, and of Major Laing, showed the strong and general interest on the subject of African geography. In 1822, the important expedition under Major Denham and Lieut. Clapperton set forth. After crossing the desert, the travellers reached the great inland sea or lake called the Tchad, the coasts of which to the west and south were examined by Major Denham. This lake, from 400 to 600 feet above the level of the sea, is one of the most remarkable features in the physical geography of Africa. Lieut. Clapperton, in the meantime, proceeded through the kingdom of Bornou and the country of the Fellatahs to Sockatoo, situated on a stream supposed to run into the Niger. A great mass of information respecting the countries eastward of Timbuctoo was the result of his expedition. Soon after his return to England, Clapperton was sent out by the government to conduct a new expedition, and was directed to proceed to the scene of his former adventures. Having reached the Niger at Boussa, where Park was killed, he passed through various countries, and reached Sockatoo, where he died; and Lander, his friend and servant, commenced his return to England with Clapperton's journals and papers. Major Laing, meanwhile, had visited Timbuctoo, and transmitted home accounts of this famous city, where he spent some weeks; but on his return he was murdered, and his papers have never been recovered.

Though the knowledge of interior Africa now possessed by the civilized world is the progressive acquisition of many enterprising men, to all of whom we are profoundly indebted, it can not be denied that

the last great discovery has done more than any other to place the outline of African geography on a basis of certainty. When to this is added the consideration that it opens a maritime communication into the centre of the continent, it may be described as the greatest geographical discovery that has been made since that of New Holland.

It is estimated that the course of the Quorra is about 2,300 miles. The countries watered by it and its tributaries are fertile, and enjoy a climate said to be much superior to that of many other parts of Africa. We take the following abridged descriptions from the journal of John and Richard Lander, who were commissioned by the British government, to ascertain the course of the Niger, and to follow its channel to its termination wherever it might be. On the 24th of June, 1829, getting into the main stream of the Niger, they found it flowing "through a rich and charming country." The channel from being half a mile in breadth, gradually widened to rather better than a mile. "Beautiful, spreading, and spiry trees adorned the country on each side of the river, like a park; corn, nearly ripe, waved over the water's edge; large open villages appeared every half hour; and herds of spotted cattle were observed grazing and enjoying the cool of the shade. The appearance of the river, for several miles, was no less enchanting than its borders: it was as smooth as a lake; canoes laden with sheep and goats were paddled by women down its almost imperceptible current; swallows and a variety of aquatic birds were sporting over its glassy surface, which was ornamented by a number of pretty little islands."

June 25th. The river gradually widened to two miles, and continued so as far as the eye could reach. "It looked very much like an artificial canal, the banks having the appearance of a dwarf wall, with vegetation beyond. In most places the water was extremely shallow, but in others it was deep enough to float a frigate. During the first two hours of the day, the banks were literally covered with hamlets and villages; fine trees, bending under the weight of their dark foliage, everywhere relieved the eye from the glare of the sun's rays, and, contrasted with the lively ver-

ture of the little hills and plains, produced the most pleasing effect." Afterward the scenery decidedly changed, the banks consisting of "black rugged rocks: large sand-banks and islands were scattered in the river, which diverted it into a variety of little channels."

June 27th. A range of black rocks running directly across the stream, and the water, finding only one narrow passage, rushed through it with great impetuosity. The canoe was lifted by main force into smoother water, and when this reef was passed the river offered no similar impediments to its navigation. It now presented a noble appearance. Not a single rock or sand-bank was anywhere perceptible, its borders resumed their beauty, and a strong, refreshing breeze, which had blown during the whole of the morning, now gave it the motion of a slightly-agitated sea. This day they passed two verdant isles of singular beauty, as charming as the fabled gardens of Hesperia.

August 4th. At no great distance from this place (Boussa), and within sight of it, all the branches of the Niger meet, and form a beautiful and magnificent body of water, at least seven or eight miles in width. At Boussa, within five miles, the river is only a stone's throw across, and the channel is of proportionate depth—circumstances which favor the opinion that a portion of its waters is conveyed by subterranean channels from the town of Gar-nicassa to a few miles below Boussa.

October 4th. "The banks of the river near Lever, are high, being, according to our estimation, about forty feet above the river, and steep to the water-side. The river itself appeared deep, and free from rocks of any kind; its direction nearly south. We ran down the stream very pleasantly for twelve or fourteen miles, the Niger, during the whole distance, rolling grandly along—a noble river, neither obstructed by islands nor deformed by rocks and stones. Its width varied from one to three miles. Both banks of the river were overhung with large shady trees." The country seen from the river appeared open and well cultivated, and thickly inhabited.

October 5th. "Just below the town of Bajiebo the Niger spreads itself into two

noble branches of nearly equal width, formed by an island. The country beyond the banks was very fine." After passing the above island, both banks of the river "were embellished with mighty trees and elegant shrubs, which were clad in thick and luxuriant foliage, some of lively green, and others of darker hues; and little birds were singing merrily among their branches. Magnificent festoons of creeping plants, always green, hung from the tops of the tallest trees, and, drooping to the water's edge, formed immense natural grottoes, pleasing and grateful to the eye." But the travellers remark: "Yet with all its allurements, there is something wanting in an African scene to render it comparable, in interest and beauty to an English landscape." They add, that "In Africa, generally speaking, a loneliness, a solemnity, a death-like silence pervades the noblest and most magnificent prospects, which has a tendency to fill the mind with associations of sadness."

October 16th. The travellers in vain endeavored to effect a landing, but unfortunately every village was situated "behind large thick morasses and shingly bogs," which it was impossible to penetrate. The width of the river seemed to be two or three miles across, and at other places double that width. The current was running at the rate of three or four miles an hour, and the direction of the stream was nearly east. In the course of this day and the following night they had travelled a distance little short of a hundred miles. The character of the scenery completely changed. "The Niger, in many places and for a considerable way, presented a very magnificent appearance, and we believe it to have been nearly eight miles in width."

October 17th. "The banks now became high and beautifully cultivated; palm-trees grew in profusion, and the towns and villages were not more than two or three miles from each other. We observed some hundreds of large canoes, with a hut in their middle, passing along the river, some crossing and re-crossing to the opposite banks, while others were pursuing their course along them. They mostly seemed to contain families of

people; for while the men were paddling, the women and girls were singing to a guitar with their little delicate voices, and produced a very pretty effect." The river was estimated to be from three to five miles in width.

October 25th. On this day our travellers reached the junction of the Quorra and Tchadda, a view of which is given in our engraving. "At one, A. M., the direction of the river changed to south-south-west, running between immensely high hills. At five o'clock this morning, we found ourselves nearly opposite a very considerable river, entering the Niger from the eastward: it appeared to be three or four miles wide at its mouth, and on the bank we saw a large town, one part of which faced the river and the other the Quorra. We at first supposed it to be an arm of that river, and running from us, and therefore directed our course for it. We proceeded up it a short distance, but finding the current against us, and that it increased as we got within its entrance, and our people being tired, we were compelled to give up the attempt, and were easily swept back into the Niger. The banks on both sides of the Tchadda, as far as we could see up it, were very high, and appeared verdant and fertile." In the course of the day they found the bed of the river with a rocky bottom, which caused its surface to ripple exceedingly.

October 26th. They passed a town situated close to the water's edge, in an elevated situation and on a fine greensward, supposed to be Atta, the appearance of which is described as "unspeakably beautiful." Afterward, for thirty miles, not a town or village, or even a single hut, was to be seen. "The whole of this distance our canoe passed smoothly along the Niger, and everything was silent and solitary; no sound could be distinguished save our own voices and the plashing of the paddles with their echoes; the song of birds was not heard, nor could any animal whatever be seen; the banks seemed to be entirely deserted, and the magnificent Niger to be slumbering in its own grandeur."

November 8th. The travellers to day found themselves "on an immense body of water, like a lake, and at the mouth of

a very considerable river flowing to the westward, it being an important branch of the Niger. Another branch also ran hence to the southeast, while our course was in a southwesterly direction, on the main body; the whole forming, in fact, three rivers of considerable magnitude. On Sunday, *November 14th*, to their great joy, they came within the tide-way of the river. Their progress was a good deal interrupted by sand-banks. On the 15th, they landed, and while at breakfast on shore the tide ebbed and left their canoes lying in the mud; and on the 18th, they reached the sea, and went on board an English brig at the mouth of the river. As they approached the sea the banks were so much overflown that the trees appeared to be growing out of the water. On the 9th of June, 1831, the two brothers reached England with the intelligence of their discovery.

In 1832, some spirited merchants of Liverpool fitted out two steam-vessels and a transport for the purpose of attempting the ascent of the Quorra to Sockatoo or Timbuctoo, and to carry on a trade during their voyage. Unfortunately the expedition failed in consequence of the wreck of one of the steamboats. Yet the countries watered by the Niger having been opened by the discovery of the Landers, the period probably is not far distant when this hitherto-neglected portion of the globe may become an extensive field for commerce and industry. Mr. Laird, a recent traveller in Africa, says: "The delta of the Niger alone, if cleared and cultivated, would support a population, in proportion to its area, far exceeding anything known in Europe."

BENEFITS OF ADVERSITY.—A smooth sea never made a skilful mariner; neither does uninterrupted prosperity and success qualify for usefulness or happiness. The storms of adversity, like the storms of the ocean, arouse the faculties, excite the invention, prudence, skill and fortitude of the voyager. The martyrs of ancient times, in bracing their minds to outward calamity, acquired a loftiness of purpose, a moral heroism, worth a life of softness and security.

EARTHQUAKES.



HOCKS of earthquakes have been felt in New England as early as 1638—'58—'63, and 1727, and 1755; the latter, owing to its violence, was called the "great earthquake." It created general consternation through all New England. For several days in succession shocks, rumbling noises, and vibrations, rapidly succeeded each other. A cistern in a distillery was burst by the agitation of the liquor in it; the spindles of the vanes on some of the steeples bent, that of Faneuil Hall being broken off. Bricks were thrown from chimneys to the distance of thirty feet horizontally. The duration of the whole shock is said to have been four minutes. The frost on the ground at the time is reported to have been five times greater than common. But, what is surprising, the barometer and thermometer underwent no alteration at the time! Darwin, in his *Journal*, speaking of the earthquake in Valdivia (Chili) in 1835, compares the sensations experienced from the earth billows to the movement of a vessel in a little cross ripple, or still more "like that felt by a person skating over the ice which bends under the weight of the body." The same writer also observes, that in the forest the phenomenon, though deeply interesting, is by no means as awe-exciting as in the town, where the "creaking and rattling" of the wood-built houses—the wildness and terror of the affrighted inhabitants rushing in confusion from their dwellings, give to the whole scene that indescribable horror which attends the phenomena of earthquakes. The first great earthquake on record occurred 373 B. C., when the ancient cities of Helice and Bura were destroyed. The former was one of the chief cities of Achaia. In 115 A. D. Antioch was destroyed; and 1147, Catania was swallowed up. In 1783, the fearful earthquake of Calabria happened which destroyed forty thousand persons. In 1811 South Carolina and the valley of the Mississippi were visited.

The craters of volcanoes act as safety-valves; where there is no safety-valve there must be an earthquake. Sixty-one earthquakes have occurred on the coast of Chili. An earthquake at Lisbon, capital of Portugal, in 1755, shook all the seas of Europe, the north of Africa, and the West Indies, and even *Lake Ontario*! It lasted only six seconds, but in that time it destroyed one quarter of the dwelling-houses, all the public buildings, and 30,000 inhabitants of Lisbon.

During an earthquake at Lima, the officer of a ship says that the ship was violently tossed, the surface of the water *boiled*, and was covered with dead fishes. In 1796, three quarters of the city of Lima and one hundred and twenty thousand of its inhabitants were destroyed by an earthquake.

In 1822, an earthquake destroyed the greater part of Aleppo in a few seconds, together with 30,000 persons.

On the 1st of January, 1837, an earthquake visited the countries along the eastern extremity of the Mediterranean. The towns of Damascus, Acro, Tyre, and Sidon, suffered great damage, and Tiberias and Safet were entirely destroyed, with 6,000 souls.

On the 29th September, 1717, the town of Guatemala was greatly damaged by an earthquake, and entirely destroyed by another on 29th June, 1773.

Caraccas was destroyed by an earthquake, with 12,000 of its inhabitants, in 1812.

During an earthquake, in 1797, Quito was greatly damaged and Redbamba levelled to the ground, and 40,000 persons were buried in the ruins.

The town of Lima has always been very subject to earthquakes. Besides the earthquake already mentioned, it was almost entirely destroyed on 20th October, 1687, and again on the 28th October, 1746. During the latter, the port of Callao was inundated by the sea, and every soul perished. Concepcion, in Chili, was destroyed in 1730, 1751, and 1835, by earthquakes and inundations.

Islands have been formed by the force of volcanic action, and it is a curious fact that earthquakes frequently have an opposite effect. For instance, in the year

867, Mt. Arcarey fell into the sea. Many towns in Japan, in China, were covered by the sea in 1596. In 1638, St. Eapheme settled into a lake. In 1642, Port Royal sank into the sea. In 1819, a large tract of land at the mouth of the Indus sank.

Earthquakes sometimes cause a raise in the land. During an earthquake on the Chilian coast, a tract of land, one hundred miles long, was elevated from two to seven feet. At the same place, in 1835, the land was raised ten feet. This caused a great wave of the sea twenty-eight feet high, which rushed in and destroyed the town of Jalcagnano. The amount of land elevated was equal to fifty-seven cubic miles, or 365,000,000 of the great pyramids of Egypt. During an earthquake in the eastern part of Iceland, in 1819, 2,000 square miles of land were converted into an inland sea; at the same time 7,000 square miles, or more than one fourth of Iceland was raised ten feet.

THE PERUVIANS.



For the early history of the Peruvians we have but little knowledge, owing to that barbarian policy exercised by the followers of Cortez and Pizarro, in destroying everything belonging to the tribes which they conquered. Like the Mexicans, the Peruvians had advanced in art, science, and learning, under the administration of successive wise rulers, and their state archives contained written histories of their country, from the dawn of civilization among them, till the period of the conquest. But the superstitious Spaniards committed these works to the flames, because of their heathen origin, and we are obliged to depend almost exclusively upon the truth of tradition, for the knowledge we possess of the history of this people during the inca dynasty.

Like other aborigines of this continent, the Peruvians were nomadic tribes and gained a subsistence by hunting and fish-

ing. Superstitious in the extreme, their objects of worship were as numerous as those of the Egyptians. They adored mountains because they sent forth refreshing streams; the rivers because they fertilized the soil; the trees that bore fruit the animals they slew for food, and the ocean as the great mother of fishes.

Fear seemed to be the great prompter to worship, and their sacrifices were propitiatory, rather than offerings of gratitude and love. They erected altars to tigers and serpents, sacrificed to the directors of storms, whirlwinds, and volcanoes, and frequently offered up their children to avert the wrath of some imaginary malignant deity. They believed, however, in a great head, a universal ruler, to whose will all other gods were subordinate; and to the benevolence of this great being, they ascribed the elevation of their country and its inhabitants from a wilderness and ferocious barbarism, to a well cultivated and quite civilized region.

According to the chronicles of the ancient priests, and the traditions of the present natives of Peru, Divine Omnipotence compassionately sent to them the wise and virtuous Manco Capac and the beautiful Oello, his sister, and his wife, for the purpose of spreading the seeds of civilization among them, that they might reap a rich harvest of happiness. This event occurred about four hundred years prior to the Spanish invasion. Whence they came, none knew, but it was generally supposed that they came down from heaven, commissioned to increase the happiness of the human race. However fabulous their traditions may appear concerning this pair and their acts, there can be no doubt of the fact, that Manco Capac, one of the first of the inca dynasty, was a man of extraordinary abilities, and did much toward raising the people from a state of great degradation, to comparative civilization and happiness. He performed the double duties of lawgiver and priest, instructing them in those principles of jurisprudence, founded upon social sympathies, which tend to moral and intellectual elevation; and he taught them a religion far more rational and humane than they were before influenced by.

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Interior of the Temple of the Sun, at Cuzco, Peru.

Peruvians to till the ground and irrigate it by changing the course of streams, while Oello instructed the women to educate their children in the ways and precepts of virtue, and to obey their husbands. He fixed the division of lands and enjoined every man to devote some portion of his time to the assistance of his neighbor, thus promoting brotherly love. He instructed the people to show their gratitude by worshipping the sun, the great vivifier of creation, and thus based a system of religion upon one of the best of human virtues. In a little time, wandering tribes became assimilated, and they built themselves houses and overturned their altars red with the blood of human victims. In a word, this great reformer who doubtless came from the Toltecs or Aztecs, then quite a civilized people inhabiting Central America, poured a flood of light into the dark valleys of Peru that unfolded the beauties of civilization and made the "desert blossom as the rose."

But in the judicial and religious systems of this reformer, there were serious defects. He compelled his subjects to submit in all things to the will of the incas, or kings, and materially retarded the progress of genius, by making it unlawful for a son to follow any profession different from his father's. The latitude given to the incas had a mischievous effect, and his successors became despotic in the extreme. Their subjects were permitted to approach them only with rich offerings in their hands, and the people of a whole province have been destroyed, to gratify the cruel caprice of one of these rulers. So divine and reverend was the inca considered by the people, that when he died, many human victims were sacrificed at his tomb.

Their civil and religious laws were rigidly administered, and many of them were of the most sanguinary nature. For instance, if a priestess of the sun (which office was filled by virgins), broke her oath of chastity and was discovered, she was buried alive, her paramour suffered the most cruel torments, and the father, mother, brothers and sisters of both, were considered accomplices and were all thrown upon a funeral pile together and consumed. A boundary was drawn round the birth-

place of the two lovers, and it was for ever afterward left a wilderness.

Many remains of ancient civilization may still be seen in Peru, especially in the vicinage of Cuzco, the capital of the incas. There are remains of a road extending from Cuzco to Quito, a distance of fifteen hundred miles, and in the lower part of the country was another one of nearly equal magnitude. Many fine roads extended from the centre to the confines of the empire, when Pizarro entered that country. Along these roads, granaries were built at certain distances, and the incas built houses of charity that were constantly open to the weary traveller. Temples, fortresses, and canals, were to be seen in all directions, and the amount of gold used in the erection of fanes and monuments, was immense. In the imperial gardens of Cuzco, trees and shrubs of gold and silver were formed, and every article in the interior of the palace was made of the precious metals. It was these immense treasures that excited the cupidity of the Spaniards, and caused the overthrow of the great empire of the incas.

The most magnificent of all the Peruvian temples, was that of the sun at Cuzco, the interior of which is represented in our engraving.

The mode of worship in the temple of the sun, was similar to that of Heliopolis in Egypt, where this great luminary was adored. His golden image occupied a large portion of one side of the interior of the temple, and before this the worshippers prostrated themselves with rich offerings in their hands, which were received by the attendant priests. Several virgins, selected from the first families in the kingdom, were in constant attendance, whose duty it was to make oblations of wine to the burning deity and chant hymns of praise to the great Father of Light.

A Dominican monastery now occupies the site of the temple of the sun, and it is said that its walls are those of that ancient edifice. It is also related that the altar stands upon the very spot where the golden image of the orb was adored. Pinkerton remarks that "a nunnery now stands on the situation, where lived the virgins of the sun."

HISTORY OF THE MASTODON RACE.



So far as is known at present, the whole race of mastodons is extinct. There is no evidence of their existence at this day. But the numerous remains of them found in this country, indicate that they have at some period lived in great numbers on this continent. At what time this was, we shall consider hereafter. Their range, however, does not appear to have extended over the whole of North America, but to have been confined mostly to the rich alluvial valleys. Portions of two skeletons only have been found north of Orange county in the state of New York. East of the Hudson river, portions of two have been discovered. Orange county, however, seems to have been the northern limit of their range, and the Hudson river the eastern boundary. Passing then south through New Jersey, and thence westward through all the great western valleys, throughout this whole region the bones are found in greater or less abundance. The saltlicks of Kentucky have furnished the most of these remains; and it has been stated, that from one of these localities alone, portions of more than one hundred skeletons have been removed. This species of mastodon is peculiar to this continent, no remains of it having been found in any other portion of the globe.

The first bones and teeth of this animal were found as early as 1812, at Albany; and were noticed in the philosophical transactions, in a letter from Dr. Mather to Dr. Woodward. In 1739, a French officer, by the name Longueuil, discovered some of the bones, teeth, and tusks, near the Ohio river; and the next year, larger quantities of similar bones were washed up by the current of the same river. After this time the bones were occasionally found, down to the present, but often very much decayed, and never in sufficient quantities to make an entire skeleton. The scientific world is much indebted to the

late Mr. Peale, who, with great labor and at much expense, procured, in 1800, sufficient bones to enable him to construct a tolerably complete skeleton, which is now in the Philadelphia Museum.

But though the living animal is unknown to us, the aboriginal inhabitants of this country seem to have been acquainted with them. Many people are disposed to place very little dependence upon Indian tradition; but however vague such tradition may become in relation to particular facts, by long transmission from generation to generation, yet it must have something real and true for its origin. Such we believe to be the fact in relation to this animal. We shall, therefore, give a few of these traditions as concisely as possible.

In President Jefferson's notes on Virginia, we find the following tradition of the Indians, in relation to this animal:—

"That in ancient times a herd of these tremendous animals came to the Big Bone Lick, and began a universal destruction of the bear, deer, elk, buffaloes, and other animals, which had been created for the use of the Indians.

"And that the Great Man above, looking down, and seeing this, was so enraged, that he seized his lightning, descended on the earth, and seated himself on a neighboring mountain, on a certain mountain rock, where the print of his feet are still remaining, whence he hurled his bolts among them, till the whole were slaughtered, except the big bull, who, presenting his forehead to the shafts, shook them off as they fell, but at length, one of them missing his head, glanced on his side, wounding him sufficiently to make him mad; whereon springing round, he bounded over the Ohio at a leap, then over the Wabash at another, the Illinois at a third, and a fourth leap over the great lakes, where he is living at this day."

A Mr. Stanley, who was taken prisoner by the Indians, and carried beyond the western mountains to where a river runs westward, says that these bones abound there, "and that the natives described to him the animal to which these belonged, as still living in the northern parts of their country."

The following we extract from Dr.

Koch's pamphlet on the Missouri: "One man, in 1816, has asserted that his grandfather told him that he saw one of these animals in a mountain pass when he was hunting; and that on hearing its roar, which he compared to thunder, the sight almost left his eyes, and his heart became as small as an infant's."

The opinion is a very prevalent one, that these animals were antediluvian, and most persons reject with a sneer the idea that they have lived at a very recent period. But the first has no ground or shadow of ground for belief, and all the evidence seems to show that they have existed not many centuries since.

Mr. Jefferson, in his notes on Virginia, reasons thus: "It may be asked why I insert the mammoth as if it still existed? I ask, in return, why I should omit it as if it did not exist? The northern and western parts still remain in their aboriginal state, unexplored and undisturbed by us, or by others for us. He may as well exist there now as he did formerly, where we find his bones," &c. The same reasoning which he used will apply, with a diminished force it is true, to our own times. There are still vast portions of this continent yet unexplored by the white man, and inhabited only by hostile Indian tribes. Vast gorges of the mountains in the west might still contain the living animal, and yet we be utterly ignorant of his existence. But we will not contend for his present existence. We will examine briefly the evidence of his having lived within a very few centuries.

In the first place, the testimony of the Indians, but a few years back. They stated in the early part of this century, that this animal still lived north of the Missouri river. They called it "Pere du bœuf" (father of cattle). But how shall we reply to the question, if the animal has lived in these parts of the country within so short a time, why did not the early white settlers either see them or hear of them from the Indians? To this we answer, that after the discovery of this country, the settlements of it took place very slowly, and then was principally in those parts which have not apparently been in the track of the mastodons. That they did not hear of them from the Indians is

not wonderful, for there was nothing to excite inquiry with regard to them. If a bone of one had been found at that period, and thus inquiry started, doubtless something would have been ascertained far more distinctly than has since been learned.

That they were not antediluvian, is settled by the fact of their being found in a deposit of marl and peat, all of which has been formed in modern times, and which is still forming. Moreover the fact that the bones in the skeleton, from Orange county, are so fresh, containing a large portion of animal matter, and that the contents of the stomach and intestines were found unchanged apparently by time, is strong evidence that this individual has lived at a very recent period, and we may put down five hundred years ago as the most distant time at which he lived; and we are strongly inclined to the opinion, that if extinct now, they have not been extinct one hundred years in the western parts of this country.

CRETAN OR WALLACHIAN SHEEP.



F all domestic animals, the sheep was one of the earliest if not the earliest that submitted to man; it has spread with him as he has spread,

and is essentially dependent upon his care and protection. The varieties into which it has ramified are extremely numerous; in fact, each country has its own peculiar breeds; but these breeds are not specifically distinct from each other; they produce a fertile progeny, with the blended features of the parents.

The Cretan sheep is said to be common in Wallachia, Hungary, Austria, and the western parts of Asia. Like its relatives peculiar to Europe, it is very stupid, but at the same time vicious and unruly, and of amazing strength. Its horns are very large, spirally contorted, adding greatly to its striking and picturesque appearance.

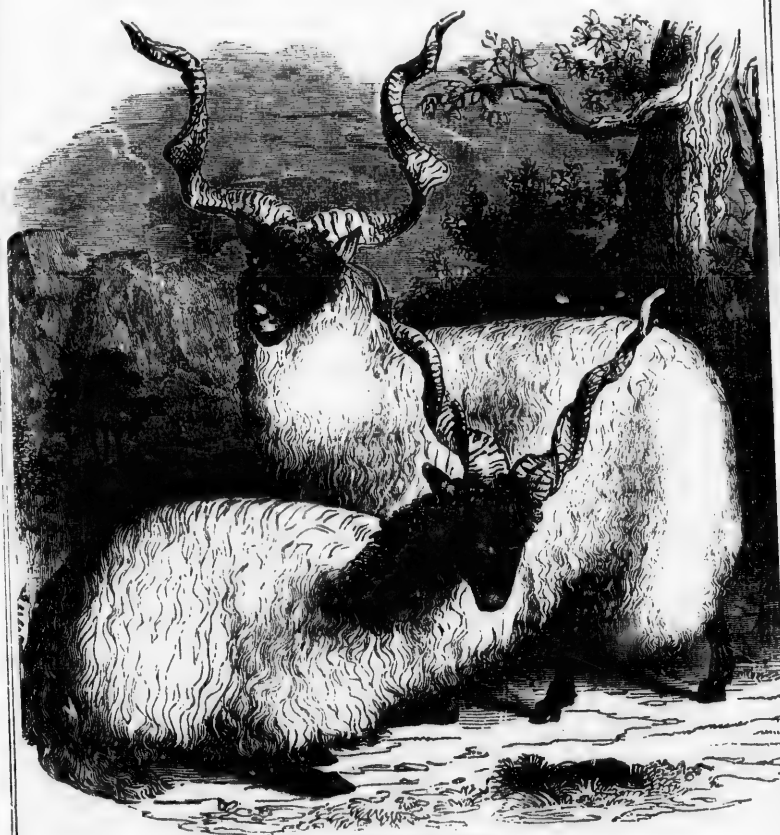
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Crested or Wallachian Sheep.

Its wool, if wool it could be called, differs materially in quality and texture from that of our breeds. Instead of being curly and matted, or felted into a mass, it is of great length, perfectly straight, close set, and beautifully fine, falling from the middle of the back on either side of the animal almost to the ground. On the face the hair is short and of a rusty black, on the body it is white. To this description it may be added, that the horns of the male mostly rise almost perpendicularly from the skull, making a series of spiral turns in their ascent, the first turn being the largest, while in the female they diverge, taking a lateral direction. In the specimen, however, to which we allude, and which is a male, they extend laterally from the skull, and after the first turn take a downward sweep. It is probable, therefore, that as far as this point is concerned, there is a certain degree of individual variation among the breed, as indeed might be expected, seeing as we do how unfixed are all the external characters of our well-known domestic races, and how soon they are capable of being modified.

According to Belon the present variety occurs in Crete, it appears to have been known in ancient times, and is considered by some to be alluded to both by Oppian and Pliny. With respect to the latter writer, this is very doubtful. In the eleventh book (cap. xlv.) he alludes to an animal called *strepsiceros*, the horns of which were erect, and wound round by a spiral wreath of rugæ, lyre-shaped and pointed; this animal, he adds, is called Addax in Africa. It is doubtless an antelope.

Buffon, in the third volume of the supplement to his work, gives a figure of the male and female of this curious race, from a drawing sent to him by Mr Collinson, of London, from whom he was in the habit of receiving many communications, but he obtained no information connected with their history.

No animal can be more unlike the Sardinian Mouflon than the Cretan or Wallachian sheep, and if that animal be indeed the origin of our domestic breeds, it proves to what an extent the modifications of physical structure may be carried by the arts of man and a combination of causes. The Mouflon is covered with coarse brit-

tle hairs, having nothing of wool in their character; yet as early as history carries us back, has the sheep been celebrated as a wool-bearing animal; and though its wool becomes lost in hot climates, such is not the case in the countries where the Mouflon now exists. The Mouflon, wild, active, and vigorous, tenants the craggy summits of the rocky mountains in Sardinia, Corsica, and some of the Greek islands. It is also abundant in the mountain ranges of southern Siberia, where it is subject to a cold rather than to a temperate climate; everywhere, however, it preserves its own characters without alteration, while in its domesticated and degenerate descendants, if such they be, which has yet to be proved, we see a perpetual series of variations, a multitude of breeds presenting diverse characters, but all of greater or less value to man, on whose care and protection they all equally rely.

JULY.



JULY, so named in compliment to the great Roman commander, was called by the Saxons *Hig-Monath*, or the season of hay harvest.

As January is the coldest, July is the hottest, month of the year. The direct influence of the sun, indeed, is continually diminishing after the summer-solstice; but the earth and air have been so thoroughly heated, that the warmth which they retain more than compensates, for a time, the diminution of solar rays. The effects of this weather upon the face of nature soon become manifest. All the flowers of the former month diminish in beauty, shrivel, and fall; at the same time their leaves and stalks lose their verdure, and the whole plant hastens to decay. Many plants, however, do not begin to flower till July: these are, particularly, the aromatic, the succulent, or thick-leaved, several of the aquatic, and of those called

compound-flowered, in which many florets are collected into one head, as the thistle, sowthistle, hawkweed, &c. The lily is one of the principal ornaments of gardens in this month; and, with its delicate white flowers, gives an agreeable sensation of coolness to the eye.

The animal creation seem oppressed with languor during this hot season, and either seek the recesses of woods, or resort to pools and streams, to cool their bodies and quench their thirst.

The insect tribe, however, are peculiarly active and vigorous in the hottest weather. These minute creatures are for the most part annual, being hatched in the spring, and dying at the approach of winter: they have therefore no time to lose in indolence, but must make the most of their short existence; especially as their most perfect state continues only during a part of their lives. All insects undergo three changes, in each of which they are transformed to a totally different appearance. From the egg, they first turn into caterpillars or maggots, when they crawl upon many feet, and are extremely voracious; many kinds of them doing much mischief in the gardens, and sometimes devouring the leaves of the trees, and even the herbage on the ground. This is their state in the spring. They next become *aurels*, or *chrysalides*, when they resemble an infant closely wrapt in swaddling clothes, being motionless, taking no nourishment, and, indeed, having no appearance of living creatures. From this state they burst forth into the perfect insect, shining in all its colors, furnished with wings, full of activity, capable of propagating its species, and feeding, for the most part, on thin liquid aliments, such as the honey of flowers and juices of animals. Most of them continue thus but a short time. The male impregnates the female; she lays her eggs; and they both die.

This is a favorite season for the entomologist. Large copper and other butterflies are very active during this period—the large tiger and lark moths are also to be found.

The luxury of cooling shades is now peculiarly grateful; and, indeed, is scarcely desired in this climate longer than a few weeks at the height of summer.

"Welcome, ye shades! ye bowery thickets, hail;
Ye lofty pines! ye venerable oaks;
Ye ashes wild, resounding o'er the steep;
Delicious is your shelter to the soul.
As to the hunted hart the sallying spring."

THOMSON.

Bathing, too, is a delightful amusement at this season; and happy is the swimmer who is able to enjoy the full pleasure of this healthful exercise. The power of habit to improve the natural faculties is in nothing more apparent than in the art of swimming. Man, without practice, is utterly unable to support himself in the water. In these northern countries, the pleasant bathing being short, few in proportion can swim at all; and even to those who have acquired the art, it is a laborious and fatiguing exercise. Whereas, in the tropical countries, where from their very infancy both sexes are continually plunging into the water, they become a sort of amphibious creatures, swimming and diving with the utmost ease, and for hours together, without intermission.

The excessive heats of this period of the year cause such an evaporation from the surface of the earth and waters, that, after some continuance of dry weather, large heavy clouds are formed, which at length let fall their collected fluid in extremely copious showers, and these frequently beat down the full-grown grain, and sometimes deluge the country with sudden floods. Thunder and lightning generally accompany these summer storms. Lightning is a collection of electric fire drawn from the heated air and earth, and accumulated in the clouds, which, at length overcharged, suddenly let go their contents in the form of broad flashes or fiery darts. These are attracted again by the earth, and often intercepted by buildings, trees, and other elevated objects, which are shattered by the shock. Thunder is the noise occasioned by the explosion, and therefore always follows the lightning; the sound travelling slower to our ears than the light to our eyes. Just the same thing happens when a gun is fired, at a distance. When we hear the thunder, therefore, all danger from that flash of lightning is over; and thunder, though so awful and tremendous to the ear, is of itself entirely harmless.

The effects of the great heat on the human body are agreeably allayed by the various wholesome fruits which Providence offers at this season for the use of man. Those which are now ripe are of all the most cooling and refreshing; as currants, gooseberries, raspberries, strawberries, and cherries. These are no less salutary and useful, than the richest products of the warmer climates.

Fowls moult, or lose their feathers, during this month. The smaller birds do not moult so early; but all renew their plumage before winter, when they are in their finest and warmest clothing.

THE NELSON MONUMENT, YARMOUTH.



THE Nelson monument at Yarmouth is a fluted column, 130 feet in height, erected on the South Denes, between the barracks and the mouth of the haven. The monument may be distinguished at sea by the distant mariner: there would scarcely be a more appropriate landmark. In the foundation-stone a plate was placed, on which was engraved an inscription in Latin. It is so rarely that these compositions are calculated to touch the heart and imagination, that their absence is scarcely to be regretted. Their brevity at least would be deserving of commendation. Unless, however, there exist popular sentiments shared in by all ranks, from the palace to the fisherman's cabin, it is in vain that even monuments are raised, for they can excite no adequate and appropriate interest. The truest fame is that which gives feeling of pride to the humblest man, who thus feels himself a partaker in it. It is this which strengthens the heart of a nation, nerves it in the hour of danger, and gives that confidence which leads to actions in which feelings of self-vanish, and men become heroic, whether it be on the field of battle or in civil contests. A monument which cherishes high

feelings of honor and public virtue among all classes, without exciting their fanaticism, may truly be termed national.

CLASSIFICATION OF ROCKS.

PRIMARY FORMATIONS.



HERE are two principles on which the classification of the rocks composing the crust of the earth may proceed. In the one they are regarded as mineral compounds, and arranged according to the similarity of their composition and physical properties. In the other, they are viewed as produced at successive periods, and classed according to their age. The latter is evidently best adapted to geology, considered as a history of the earth and of those revolutions it has undergone, and is now generally adopted in all cases where the relative age of the various formations can be determined. This, however, is not always the case, when the former must be chosen, and the rocks named simply as mineral compounds.

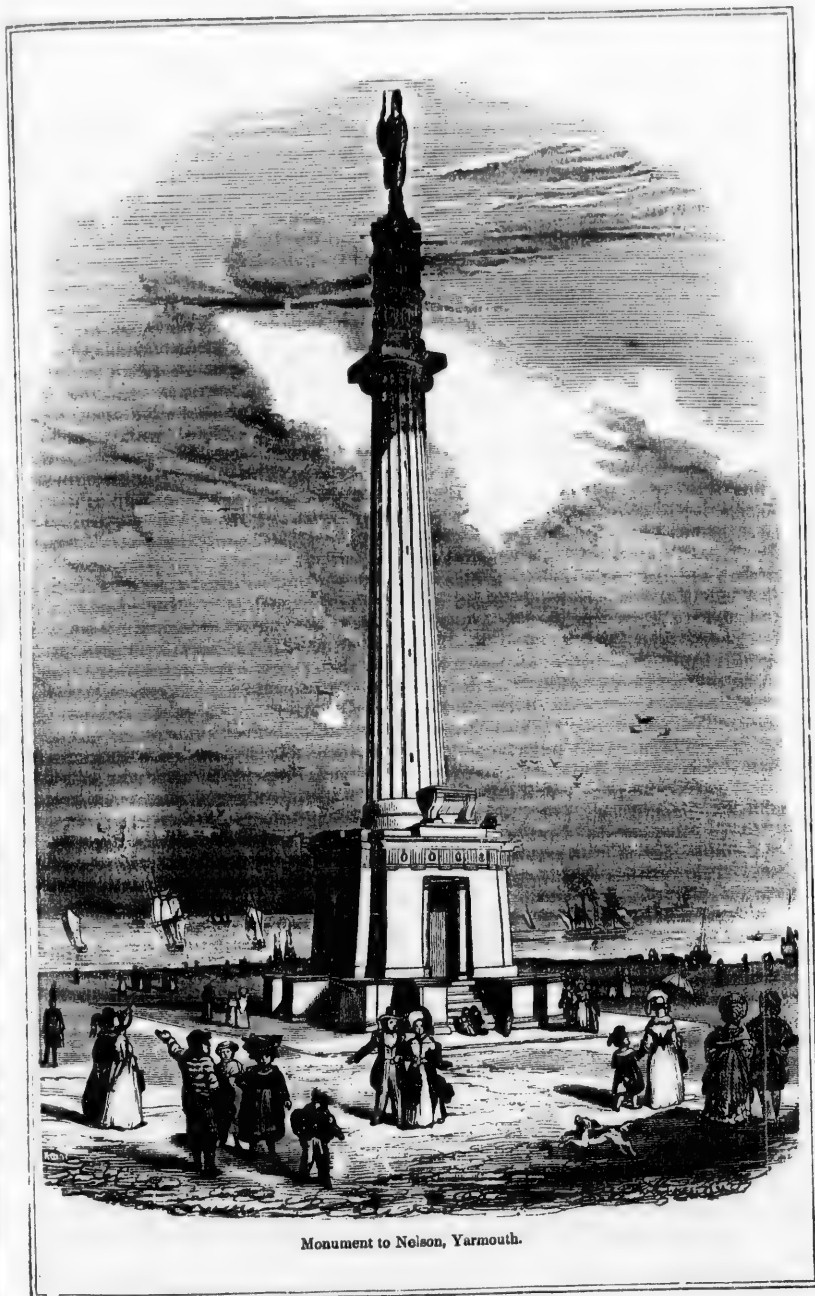
Some rocks are stratified, or divided into beds of great length and breadth compared to their thickness; others formed irregular masses of no determinate shape. This is the foundation of the first great division of rocks into stratified and unstratified; the former supposed to have been deposited from water, the latter to have been produced by igneous agency. Some rocks, it also appeared, were crystalline in their structure, others uncrystalline, and composed of fragments. Dividing the rocks on this principle, the classification is found nearly to correspond with the former; the igneous or massive rocks having in general a crystalline structure, the stratified being, on the other hand, mostly fragmentary. There is, however, a class of rocks participating in both characters, being stratified in form but crystalline in structure. These are supposed to have been originally strata consisting of fragments like the others, but

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Monument to Nelson, Yarmouth.

to have been exposed to intense heat, which has altered their structure and arranged the materials of which they were composed in new forms. On this account they are named metamorphic rocks, as having been metamorphosed or changed in their forms.

Of these three classes, only the stratified rocks occur in a certain known chronological order. Having been deposited from water, at the bottom of lakes or the sea, the oldest or first-formed beds are necessarily the lowest, and are covered successively by newer and newer strata. Hence, where these rest on each other in an undisturbed position, there is no difficulty in discovering the order of time in which they were formed, and what is obscure in one place is often cleared up in another. But in the igneous rocks no such order is discoverable. They have been produced in every period, and exhibit few, if any, certain marks by which their relative age can be determined. This is also true of the metamorphic formations, which have been produced at various times, and from strata of very different ages. From their mode of formation, however, they are usually found in the lowest position, and covered by all the other strata which may be present, and hence have been named primitive or primary rocks by the Wernerians, and supposed to constitute part of the original structure of the globe.

These three classes of rocks are generally distinguished in all systems of geology. The varieties of the igneous and metamorphic rocks, to which particular names have been assigned, are also very nearly the same. More diversity prevails in the division and classification of the stratified rocks, almost every author altering the system of his predecessors to suit his own views. The arrangement of Werner, the celebrated German mineralogist, is still the best known, and, with a few modifications from recent discoveries, the most suitable for our purpose, and we shall consequently adopt it here. According to this, there are five divisions of stratified rocks. The first, or primary, corresponds to those classed above as metamorphic. The second division, or the transition rocks, includes the oldest

unaltered beds, and was so named as forming a passage from the crystalline to the fragmentary formations. In these, animals begin to appear, though in less profusion than in the third or secondary beds, which are also more truly fragmentary in structure. These are followed by the tertiary formations, with still more abundant remains of animals and vegetables, belonging also to species more closely allied to those now existing on the earth. The fifth and last class are the recent or alluvial formations, produced by causes now in actual operation on the globe. To these we shall successively advert, noticing, at the same time, the igneous rocks connected with them in nature. Though it might seem more scientific to have described the latter by themselves, yet this arrangement appears better adapted for popular illustration, and even for giving correct notions of the structure of the earth.

In examining a district of primary rocks, like the Highlands of Scotland, or the similar parts of other countries, an arrangement of this kind is often seen. In the highest and central part of the district are granite mountains, enclosed by zones of gneiss, quartz rock, mica-slate, clay-slate, limestone, and other primary strata. It was at one time believed that these followed each other in the order now stated, but further investigation has shown that, though very common, this arrangement is by no means invariable. The order is not only reserved, but the rocks alternate or are mixed with each other in various ways.

The mineral characters of rocks, unless where they can be illustrated by specimens, are not very interesting, and we shall therefore avoid entering into details. Granite, as formerly stated, is a compound of quartz, felspar, and mica, sometimes also containing hornblende. Its varieties are very numerous, two, three, or all the four minerals above, being mixed in almost every degree of relative abundance; but that of quartz, felspar, and mica, is by far the most common, and is that most usually understood by this name. Gneiss agrees with it in composition, in almost every respect, but is divided into beds or strata, and has often a slaty structure. Mica-

slate consists of quartz and mica, arranged in distinct layers, and, consequently, divides into very thin beds, which are curiously bent and contorted. Sometimes quartz is found alone, composing quartz or quartz-rock. Clay-slate is well known as the common roofing slate with which houses are covered. Limestone is not very abundant, but is remarkable as furnishing the various statuary and ornamental marbles of commerce, the former being pure white, the latter various shades of gray, yellow, green, red, black. With these rocks, other beds of less importance occasionally occur, which it is not necessary to mention.

The manner in which these rocks have been formed has given rise to much controversy, and the theory of Hutton stated above is only partially received. Werner supposed that the whole materials of this globe were originally dissolved in the waters of a primeval ocean, which gradually deposited the various substances it contained. First of all, the granite rocks were thrown down in vast beds extending over the whole globe. Then the gneiss followed, succeeded in turn by mica-slate, clay-slate, and the other primary formations, investing the earth in successive shells, almost like the coats of an onion. His opponents soon pointed out the inconsistency of this theory with facts, and the impossibility of finding a mass of water capable of dissolving these rocks, and his aqueous chaos is now almost forgotten. Some, however, seem inclined to put an igneous one in its place. They affirm that the solar system was originally a nebula, like one of those which astronomers still observe in the heavens. That it was then a mass of intensely-heated vapor, which, cooling down, condensed and threw off the various planets which surround the sun; that the earth was then a fluid mass of molten rocks, and thus acquired its present form; continuing, however, to cool, first the granite rocks, and next the gneiss, with its associated beds, formed on the surface, while the interior, still retaining its heat and fluidity, produces earthquakes and volcanoes, with changes in the elevation of the land, and dislocations in the strata, by contracting as it cools still more. This theory is supported by many ingeni-

ous analogies in astronomy, but only its geological bearing can be here considered.

Dr. James Hutton, a singular, eccentric, but profound philosopher, who lived in Edinburgh in the end of the last century, has the merit of proposing the true theory of these rocks. He considered that granite was an igneous production, similar to lava, but differing from this in consequence of having been formed in the interior of the earth, below other rocks, and not like the latter on the surface. He also thought that many of the peculiarities in the primary beds were owing to their being in contact with this rock, which had hardened them and given them their crystalline aspect. He had long looked for some confirmation of this opinion in nature, but geology then was little understood in Scotland, and no description of its rocks, or the places where they were found, existed. At last, when on a visit in Perthshire, he examined the phenomena of Glen Tilt, a wild romantic glen which runs down from the central mountains of the Grampians to the valley of the Garry at Blair-Athol. The hills on the southeast side of the Tilt consist of quartz rock, mixed near the bottom with limestone, while on the northeast are granite mountains. Here Hutton found what he had long looked for, veins of granite running into the strata above, and was so delighted with this confirmation of his speculations as to shout loud for joy, so that his companions thought him out of his senses. In Glen Tilt the changes on the stratified rocks near the granite are very interesting, and fully confirm the Huttonian view of their origin. There seems little doubt that the marble, of green, yellow, white, or gray colors, quarried near the foot of this glen, is only a limestone altered by the vicinity of the igneous rocks. Even the fine white statuary marble of Carrara is now known to be a recent limestone changed by heat. The quarries lie in a wild desolate valley, at some distance from the town, on the western declivity of the Apennines; and the marble has probably been produced by the igneous agency elevating these mountains. In many other places, similar rocks, once believed to be the oldest on the earth, are found to have been formed at a period which, geologically considered, is very

recent. Thus the mica-slate forming Mont Blanc, the monarch of European mountains, changes gradually into a rock newer than the coal strata round Edinburgh, and this giant hill is probably more recently formed than the diminutive Arthur Seat. There is thus, therefore, no ground for considering them as portions of the original structure of the globe, at least in their present condition.

These rocks are found, almost with the same characters, over nearly the whole earth, and from its lowest plains to the summits of its highest mountains. In Europe, they have been traced from Finland and the North Cape to the mountains of Spain and Greece, on one hand, and, on the other, from the western isles of Scotland to the far distant Urals on the borders of Asia. Humboldt found them in the mountains of South America, and in North America they are seen encircling the great Canadian lakes and the still more vast basin of the Mississippi and Missouri. They form the extreme south of both the old and new continents in the cape of Good Hope and Terra del Fuego. In Asia, they are not less dominant from Siberia and the Altai mountains to the lofty chain of the Himalaya.

The character these rocks impress on the scenery is often very diverse, but in all a species of harsh rugged grandeur prevails. Each rock formation has its own peculiar character, arising from its nature and mode of decomposition, and is also favorable to the growth of certain plants and trees, which form as it were its appropriate clothing. There is a harmony prevailing throughout nature, and all its various kingdoms, which show it to be the work of infinite goodness and intelligence. Not only are the various parts of the material world beautifully adapted to each other, but also fitted to inspire the mind of man with those elevated emotions which constitute his truest and most lasting enjoyments.

But these rocks possess other recommendations, in the rich mines they contain and the valuable gems or precious stones found in them. The rock-crystal of the Cairngorm mountains was at one time in great reputation as an ornamental stone; and the amethyst, topaz, and some

others, more rarely occurred. Garnets of various sizes are common everywhere in the mica-slate, but are too abundant to have much value. In Brazil, this rock contains diamonds, more commonly, however, found in the debris or fragments near primary mountains. The emerald of Peru, the ruby, and corundum, seem to be derived principally from the granite, but, for obvious reasons, are more frequently sought for among the gravel formed by its decay. Less attractive, but more valuable, are the mines for which these rocks are justly celebrated. The granite of Cornwall contains those stores of tin which drew to its shores Phœnician merchants, centuries before the Roman legions had crossed the channel. In Sweden, the gneiss contains the richest mines of copper and iron. Gold and silver are also found in it in that land, but in less abundance than in the Ural chain which bounds the eastern side of the great plain of northern Europe. From the mines in these mountains, and in Siberia, the Russian government has obtained, in the twenty years before 1842, about 250,000 lbs. troy of gold, besides silver and platina. But the expense, even in that country, where labor costs little, is enormous, and the profit far less than might be imagined. The rich mines of America are also in similar rocks, where igneous formations have disturbed and altered the regular beds.

A speculative author of the seventeenth century maintained that the original form of the earth was a great plain, hills and mountains being the effects of that curse pronounced on the ground for the sin of man. This notion could only have originated in the mind of a native of a level country, who knew little of the true economy of nature. To an eye accustomed to a mountain land, few objects are more tiresome than a great extent of level ground with no inequalities, and such regions are seldom so fertile as those of more varied outline. In like manner, the igneous rocks, with the disruption, confusion, and alteration, they produce on the connected beds, have been looked on as inconsistent with a system of perfect wisdom and beneficence. Yet this view undoubtedly arises merely from our ignorance and partial

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knowledge of the innumerable relations subsisting among the various portions of the universe. So far as we do see, we can perceive that this irregularity is productive of beauty and a higher harmony; that these igneous rocks decompose into a rich and fertile soil; and that these convulsions promote the natural drainage of the land, so essential to its salubrity, and give rise to springs, as these, by their union, to brooks and rivers; while the rocks in which change and alteration are most evident, are the most prolific of those minerals on which so much of the comfort and happiness of men depend. It is indeed rarely safe for man to propose amendments in that system which Infinite Wisdom has adopted.

CICERO.



HE concurrent testimony of ancient and modern times has placed Demosthenes and Cicero side by side as the two great masters of ancient oratory, each eminent beyond comparison, in his own style, in his own tongue, and above his own countrymen. Each of them, by that brilliant talent, was introduced, from stations comparatively humble, to the highest office and honors which they could enjoy, and each has thus won an imperishable name. Demosthenes, however, is eminent only as a public man; Cicero is no less distinguished as a philosopher and man of letters than as a speaker and statesman.

Marcus Tullius Cicero was born at Arpinum, a small inland town of the province of Latium, about 68 miles east of Rome, in the 648th year after the foundation of the city, and the 106th before the birth of Christ. He was of very ancient, but not of patrician family. Both his grandfather and father were men of talent, possessed of influence in their neighborhood; and the father in particular was intimate with many leading men of his day. Bad health however compelled him to live in retirement, which he em-

ployed in cultivating the talents of his two sons, Marcus and Quintus, who had in addition the ablest instruction which Rome could afford. Oratory, the Roman law, and the Greek language, literature, and philosophy, were the principal branches of the future statesman's study. As an amusement, both at this time and later in life, he practised composition in verse; and he appears to have regarded his efforts with some complacency. None of them however are preserved; and to judge from the extracts which remain in Cicero's prose writings, the loss has not detracted from his reputation. The warlike constitution of republican Rome required that all her citizens should be trained to arms; and it was in compliance with the law, and not from any turn for the military profession, that at the age of 17, B. C. 89, and in the following year, Cicero served in the Marsic war. This however was but a short interruption to his laborious course of preparation for the bar, to which he steadily applied throughout the bloody civil war of Marius and Sylla. In addition to his professional studies he attended diligently the lectures of those Greek philosophers who visited Rome, and practised declamation in Greek as well as in Latin. He first appeared as an advocate, at the age of 26, B. C. 81; to which year belongs his earliest extant speech in defence of Quinctius. In the following year he defended Sextus Roscius from a charge of parricide; and obtained, according to his own report, by his speech on this occasion, which is preserved, a place among the first orators of Rome. He gained the cause; and his exertions in this case were the more honorable, because the prosecution was abetted, for private reasons, by the unscrupulous and all-powerful dictator Sylla. Soon afterward a prudential care of his health, which in youth was delicate, not unconnected probably with the apprehension of Sylla's resentment, induced him to undertake a tour in Greece and Asia, which filled up two years. During this period, however, he continued the study of philosophy and oratory, frequenting the schools of the most eminent masters wheresoever he went, both with applause and advantage. B. C. 67, after the death of Sylla, he returned to Rome.



Oloero, from an Antique Bust.

Of mature age and highly-cultivated talents, he now applied his whole mind to the practice of the law, through which he looked to attain power and dignity. The profession of an advocate at Rome was different in many respects from that of a barrister of our times; there was no body of men set apart, and called to the bar; but a client chose his advocate from the learned, or the powerful, or the eloquent, and the courts were open to the advocacy of all alike. Such services were gratuitous, for in the republican times it was disgraceful to accept money for pleading a cause: still the profit of an advocate in large practice, though indirect, was certain, especially if he looked forward to advancement in public life, to which the power of conferring obligations on a great many persons, and at the same time of displaying talents for business, very mainly contributed. It was necessary for those who aspired to the highest offices of the state to pass in rotation, with certain intervals between the holding of each office, through those of inferior dignity; and in the second year after his return, B. C. 75, he obtained the lowest of them, being made one of the *quæstors*. These were a set of officers, who had various duties, principally connected with the collection and administration of the revenue, both at Rome and in the provinces: Cicero was sent into Sicily, where he discharged his functions with usefulness and honor. He thought that his services, even in this subordinate station, could not fail to command attention: but being disappointed in this, finding that his absence had passed unnoticed, and that the people, in his own words, had dull ears, but quick eyes, he resolved thenceforward to remain at Rome, and to apply himself still more closely to the business of the forum, even to the relinquishment of those provincial governments which were the most lucrative situations that the republic had to bestow.

During the next five years Cicero's life was spent in the quiet practice of his profession; but none of his speeches during this period have been preserved, except the series in accusation of Verres, late governor of Sicily, a man infamous for extortion and cruelty. Cicero was

not fond in general of acting the part of an accuser; but his connexion with Sicily seemed to enforce the claim of the province on his services. Verres was supported by the powerful influence of an oligarchy interested in screening abuses by which they had themselves profited or hoped to profit; but the case against him was so strong that in an early stage of the proceedings he went into exile, rather than encounter the full exposure of his misdeeds consequent upon a public trial. Of the seven orations on this subject, therefore, two only (those entitled *Divinatio* and *Actio prima*) were spoken; the others, however, are finished, as if for delivery.

B. C. 69, Cicero filled the office of *ædile*; and B. C. 66, that of *prætor*. At the close of the latter he declined, according to his resolution above noticed, to take a provincial government, which magistrates usually looked to as the means of repaying with interest the enormous sums which were usually spent in gaining an election, either in direct or indirect bribery. His views no doubt were directed to the speedy attainment of his highest object of ambition, the consulship; still, as his fortune was small, and rendered adequate to the support of his rank and dignity only by a strict economy, his moderation in this respect is honorable.

In the summer of the year 64 B. C., Cicero became a candidate for the consulship, and having gained his election, entered with the new year upon the duties of his office. The state of Rome at this time was very critical. An extensive plot was organized, not to change, but rather to subvert the constitution, by the entire destruction of the party in possession of the good things of the state, and the transfer of both their political influence and private wealth to other hands. At the head of this plot was Lucius Sergius Catilina, a man known and feared, of an illustrious family, but ruined alike in fortune and character, and fitted for the desperate course into which he had now plunged, by a brain fitted to contrive, and a hand and tongue to carry through, the most daring and atrocious design. His chief supporters were men similarly situated, of high rank, expensive and profligate habits, and neither fortune nor expecta-

tions, except in the lottery of public life; in short, it was a sort of Cato street conspiracy, except that the actors were of the highest, instead of the lowest class. In Rome, it would appear, from the caution considered necessary in dealing with the conspirators, that a large proportion of the physical force of the metropolis must have been well inclined to assist their views. These were, to murder the consuls and those senators whose character and talents were to be feared; to set fire to the city, and in the confusion to seize the capital, and gain possession of the seat and ensigns of the government. The support of a large body of soldiers, trained to bloodshed in the wars of Marius and Sylla, and settled upon grants of land in different parts of Italy, was readily promised to men who held out the prospect of further benefit from civil strife. Not only the existence of the plot, but full particulars of its progress were made known to Cicero through private channels of information; but it was found very difficult to obtain legal evidence to convict the actors. Catiline, though the matter was generally notorious, maintained the bold front of innocence; and even appeared in the senate on the 8th of November. Provoked at this effrontery, Cicero burst out in what appears to have been an unpremeditated invective against him—the first oration against Catiline. In this he exposes the vices of Catiline's life, goes into the detail of his past and future schemes, and urges him to depart into exile, or repair to his associates, and begin the civil war which he had resolved; and he explains the lenity or seeming weakness of his own conduct, in opening the door of escape to such a criminal, on the ground that many could not or would not see the impending danger. If, he argued on the other hand, the chief criminal be once driven into open rebellion: "none can be so silly as not to see there is a plot, none so wicked as not to acknowledge it; whereas, by taking off him alone, though this pestilence would be somewhat checked, it could not be suppressed; but when he has thrown himself into rebellion, and carried out his friends along with him, and drawn together the profligate and desperate from all parts of the empire, not only this ripen-

ed plague of the republic, but the very root and seed of all our evils will be extirpated with him at once." He concluded with a grand burst of indignation against Catiline, who, though startled at this open attack, rose to defend himself, but was overpowered by the general outcry of the senate. He exclaimed, in fury, "Since I am thus entrapped and driven headlong by my enemies, I will extinguish the flame raised about me by the common ruin," and rushing out of the senate-house, quitted Rome that evening, and made all haste into Tuscany, where the discontented soldiery were already in motion.

This open step removed one portion of Cicero's difficulties; and fresh evidence being obtained, the principal conspirators who remained in Rome were arrested. To bring them to an open trial, or to retain them in custody, was alike thought unsafe, on account of the danger of a rescue; and the question of their fate was remitted by the consuls to the senate. It was determined, chiefly through Cicero's eloquence, that they should forthwith be put to death; an illegal act, to be justified only by that extreme necessity which overrules all law. The fourth and last Catilinarian oration is on this subject. In the evening Cicero was conducted to his own house by the senate in a sort of triumph, while the people thronged the way, saluting him with acclamations as the savior and second founder of Rome. These important transactions took place on the fifth (the *Nones*, according to the Roman calendar) of December, to which Cicero continually refers as the most glorious epoch of his life.

After his elevation to the consulship, a decided change is to be traced in Cicero's political feelings and conduct. For his promotion he had depended on the democratic elements of the constitution; having gained it, it became his object to secure the good-will, and to identify his own interests with those of the senate and nobility. In this he never completely succeeded. There was always a prejudice against him as a *new man*, that is, one who had no hereditary honors to boast; and the eminent service which he had done was rendered distasteful and almost ridiculous by his constant reference to it

in public and private, and by his overweening vanity and egotism. When the time of need came, he experienced the lukewarmness of his new friends. There was one Clodius, a dissolute young patrician, in whose prosecution for a gross violation of religion and public decency Cicero had been concerned. Clodius became his mortal enemy; and being supported for party purposes by Cæsar and Pompey, he procured the enactment of a law by which any one who had taken the life of a citizen uncondemned and without trial should be interdicted from fire and water, a phrase equivalent to outlawry and excommunication combined. This was manifestly aimed against Cicero, who by the advice of his friends withdrew into a voluntary exile, in March, B. C. 58; and shortly after his departure a law was passed forbidding him to appear within 400 miles of the capital. He took up his abode in Greece. No part of his life is less dignified than this: short as it proved, his downfall overwhelmed him with grief; and he so far lost the control of his feelings and conduct, that his mind was even supposed for a time to be disordered. His exile however did not last for a year and a half, a law having been carried, after much opposition, to authorize his return. He was received with extraordinary honors; his whole journey through Italy resembled a triumphal procession, and his entry into Rome was attended with still greater honors. "That one day," he says, "was worth an immortality; when on my approach toward the city, the senate came out to receive me, followed by the whole body of the citizens, as if Rome itself had left its foundations, and marched forward to embrace its preserver."

We can not number among Cicero's good qualities the strength of principle and moral courage which are the only security for honest and consistent conduct in stormy times. He had experienced the ill effects of provoking the powerful, and had no time to be made a martyr a second time. Hence we find him connected sometimes with Pompey, sometimes with Cæsar; ill at ease, as is evident from his correspondence, with the state of public affairs, and seldom satisfied with his own conduct. We abstain from

attempting to conduct the reader through the tortuous maze of Roman politics; in which, for some years, Cicero ceased to take a leading part. He still continued the frequent exercise of his rhetorical talents in defence of accused persons, and applied his leisure hours to the study of philosophy and the composition of his philosophical writings.

B. C. 51, Cicero was obliged, by an alteration of the law, to take the government of a province, which he had hitherto declined. Cilicia fell to his share. It had been greatly pillaged by the preceding governor; and Cicero found abundant employment in healing the disorders which his predecessor had caused. The military transactions of his proconsulship were unimportant; though he would willingly have magnified some slight successes into ground for a triumph.

He returned to Rome in January, but just before the march of Cæsar into Italy. Reduced to the necessity of choosing between the party of that daring leader and the senate headed by Pompey, he hesitated, but took the side which consistency required him to adhere to. But when Pompey found it expedient to evacuate Italy and retreat into Greece, Cicero remained behind, and negotiated for a reconciliation with Cæsar, who required from him no more than neutrality. A temporary check to Cæsar's fortunes again revealed the real bent of Cicero's wishes: he escaped to Greece, and joined the army of Pompey. In the field, however, he was no acquisition. Discontented and dispirited, he vented his spleen in evil forebodings and bitter discouraging jests. After the battle of Pharsalia he lost all hope, and returned to Italy in October, B. C. 48; where, after remaining many months in suspense, he received from the conqueror the assurance of safety.

From this time to the death of Cæsar, B. C. 44, Cicero's political importance ceased; and he lived in retirement, chiefly employed in the composition of his philosophical works, of which these few years produced an ample harvest. Cæsar's murder brought him again into public life. In that act he had no hand, probably being regarded by the conspirators as too timid and undecided to be trusted in such a

cause. But he expressed his concurrence and joy after the deed was done; and lamented, more to the credit of his foresight than of this morality, that Antony had not been included in Cæsar's doom. To Antony he was inveterately hostile; and it was with the view of making him odious, and stimulating the senate and the people against him and his friends, that the famous series of orations, which, in imitation of Demosthenes, Cicero entitled his *Philippics*, was composed and spoken. His hopes, however, and those of his party, were finally destroyed by the formation of what is called the second triumvirate, the union of Octavius with Antony and Lepidus. The bond was sealed by a new proscription, as it was called, in which those who were obnoxious to the contracting parties were consigned by name to military execution. Octavius readily abandoned Cicero to the vengeance of Antony, whose hatred was strongly roused by the profuse invectives which the orator had lavished on him. The news reached him at his Tusculan villa, about ten miles from Rome. His first thought was to escape by sea; but being opposed by the winds, and fluctuating and uncertain in his resolutions, he landed again, and proceeded to his Formian villa, near Naples, where he was put to death, without resistance, by a party of soldiers. December 7, B. C. 43, at the age of 64. His head and hands were carried to Antony, who ordered them, according to Plutarch, to be set up in the Forum, above the rostrum or platform from which he had been used to address the people.

None of Cicero's historical, and only fragments of his poetical works remain: those which are extant of his writings are divisible into four heads: 1, On the science of rhetoric; 2, On religion and moral and political philosophy; 3, Orations; 4, Letters. It was his peculiar merit to have been the first who attempted to teach the Greek philosophy in the Latin language. The multiplicity and variety of his philosophical works, of which indeed the rhetorical ones form but a branch, is wonderful when we consider how busily his life was employed: the subject, however, is too extensive and of too little general interest for us to attempt

to analyze their contents. As a speaker, Cicero wants the conciseness and fire of Demosthenes; a necessary consequence perhaps of his having to deal with a language far inferior to that of Greece in copiousness, accuracy, and energy. In elegance, variety, and, above all, in the skill of the pleader, the power of making the best of his case according to circumstances, and adapting his arguments to the audience which he had to address, it would be hard to find his superior. His letters are most valuable helps to the history of his times, and make amends for the absence of a digested history from his pen, which would have been less minute and probably less veracious. They are written for the most part, especially those to Atticus, with great freedom; and exhibit his real opinions with little reserve. Many of the heaviest charges against Cicero's integrity as a public man are based upon his correspondence; and it is to be remembered, in comparing him with others, that few public men have given us the opportunity of subjecting their conduct to so severe a scrutiny. To his Latin style in all its variety, familiar, didactic, oratorical, too much praise can not be given. He has always been regarded as the model of Latin prose composition; and, indeed, about the time of the revival of letters was regarded with an almost slavish veneration; one school of Latinists refused to use even a word or phrase which had not the sanction of his authority.

SWORD-FISH.



HE prolongs the long snout of the swordfish, bearing some resemblance to a sword in its form and employment, has in all nations procured for the fish a name expressive of this analogy. The generic character common to the species is, that the head with the upper jaw terminates in a sword-shaped snout, that the mouth is without teeth, that the gill-membrane has

s. As a speaker, his keenness and fire of argument, the necessary consequence of his power to deal with a subject, that of Greece in particular, and energy. In all, above all, in the power of making his arguments according to circumstances, to the address, it would be prior. His letters are to the history of the world, for the history from his pen, in less minute and detail. They are written especially those to the world; and exhibit little reserve. Many of his arguments against Cicero's are based upon the fact that it is to be regarded him with others, and given us the opportunity of their conduct to so his Latin style in didactic, oratorical, not be given. He is regarded as the model of the orator; and, indeed, the revival of letters was not slavish venerationists refused to accept of the ease which had no authority.

FISH.

The prolonged body of the swordfish, bearing some resemblance to a sword in its form and employment, has in all nations procured for the fish a name expressive of its generic species is, that the jaw terminates in a point, and that the mouth is covered by a gill-membrane has

The Sword Fish.



eight rays, and that the body is roundish and without scales. The two principal species are—the common sword-fish, and the broad-finned sword-fish. The common sword-fish (*xiphias gladius*) is considered as properly a native of the Mediterranean, though it sometimes strays into the Atlantic, and has been found along the coast of Europe as far as the Baltic, and along that of Africa as far as the cape of Good Hope. It has a long and round body, largest near the head, and gradually tapering toward the tail. The head is rather flat, and the mouth wide, both jaws ending in a point, but the upper extending to a much greater length than the lower. This prolonged part is that which is usually called the sword: it is of a bony substance between three and four inches wide at the base, according to the proportions of the individual to which it belongs, and tapering to a sharp point. It is covered by a strong epidermis or scarf skin, rough to the touch like sand paper. A deeply-impressed line or furrow runs down the middle of the upper part, and three similar furrows on the lower surface. It has only one fin on the back, which runs along the whole length of it. It is very high at the commencement, and sinking suddenly, becomes very shallow, and is continued to within a short distance of the tail, terminating in an elevated point. The tail is large and crescent-shaped, and on each side of the body, immediately before it, is a strong finny appendage. The general color of the fish is brown, accompanied by a deep steel-blue cast on the head and upper parts, and inclining to silvery white on the sides and abdomen. It sometimes grows to a very large size, and as much as twenty feet in length.

The sword-fish is very active in its movements and voracious in its appetite. It feeds on the smaller kinds of fish, which it kills by piercing them with its sword. It is said to be in particular a very great enemy to the tunny, which is described by Belon to be as much alarmed by its appearance as a sheep is at the sight of a wolf.

This fish is highly esteemed as an article of food by the Sicilians, who buy it up eagerly at any price at the commence-

ment of the season, which lasts from May to August. They cut it into pieces, and salt it for future use. This process was in ancient times particularly performed at the town of Thuri in the bay of Tarentum, whence the fish was called *tomus thuriannus*. A description of the ancient manner of taking this fish has been left us by Strabo, from which it appears that the process was the same as that now in use. A man mounts upon a cliff that overhangs the sea; and as soon as he discovers the fish, gives notice to a boat in attendance of the course it has taken. A man in the boat then mounts the mast, and on seeing the sword-fish direct the rowers toward it. As soon as they think themselves within reach, the man on the mast descends, and taking in his hand a harpoon, to which a cord is attached, strikes it into the fish, sometimes at a considerable distance. After being wearied with its agitations and attempts to escape, as well as exhausted by its wound, the fish is seized and drawn into the boat. The operation has considerable resemblance to the whale fishery on a small scale. The superstitious Sicilian fishermen have an unintelligible chant, which they regard as a most essential part of their apparatus. Brydone thinks it is Greek: but be that as it may, the fishermen are convinced of its efficacy as a charm, its operation being to attract and detain the fish near the boat. There are certainly some Italian words in it, although it is said that the men believe that the fish would dive into the water and be seen no more if it happened to hear a word of Italian.

THE NUMBER SEVEN.



EVEN, so often mentioned in the sacred writings, has always had a kind of emphasis annexed to it. It is by some called the number of perfection, being composed of the first two perfect numbers, equal and unequal, three and four—(for the number two consisting of repeated

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unity, which is no number, is not perfect). In six days creation was perfected—the 7th was consecrated to rest; if Cain be avenged 7 fold, truly Lamech 70 and 7 fold: Noah had 7 days warning of the flood, and was commanded to take the fowls of the air into the ark by 7's and the clean beasts by sevens; the ark touched the ground on the 7th month, and in 7 days a dove was sent, and again in 7 days after. Abraham pleaded 7 times for Sodom; he gave 7 ewe-lambs to Abimelech for a well of water. Jacob served 7 years for Rachel, and also another 7 years. Joseph mourned 7 days for Jacob. Laban pursued after Jacob 7 days journey. The 7 years of plenty, and the 7 years of famine, were foretold in Pharaoh's dream by the 7 fat and the 7 lean beasts, and the 7 ears of full and the 7 ears of blasted corn. The children of Israel were to eat unleavened bread 7 days. The young of animals were to remain with the dam 7 days, and at the close of the 7th to be taken away. By the old law, man was commanded to forgive his offending brother 7 times; but the meekness of the Savior extended this forbearance to 70 times 7. On the 7th day of the 7th month, a holy observance was commanded to the children of Israel, who fasted 7 days in tents. Every 7th year was directed to be a year of rest for all things, and at the end of 7 times 7 years commenced the Jubilee; they were to observe a feast 7 days after they had gathered in their corn and wine; 7 days they were to keep a solemn feast, as they had been blessed in the work of their hands. Every 7 years the land lay fallow. Every 7 years there was a general release from all debts, and all bondsmen were set free. From this law may have sprung the custom of binding young men to 7 years' apprenticeship, and of punishing offenders with 7 years, twice 7, or three times 7 years imprisonment. Every 7th year the law was directed to be read to the people; if they were obedient their enemies should flee before them 7 years; if disobedient their enemies should chase them 7 ways. In the destruction of Jericho, 7 priests bore 7 trumpets 7 days, on the 7th day they surrounded the walls 7 times, and after the 7th time the walls fell. Hannah, the mother of Sam-

uel, in her thanks, says, that the barren hath brought forth 77, as some Jewish writers say that his name answers to the value of the letters in the Hebrew word which signify 7. 7 of Saul's sons were hanged to stay a famine. Jesse had 7 sons, the youngest of whom ascended the throne of Israel. The number of animals in sundry of their obligations was limited to 7. Solomon was 7 years building the temple, at the dedication of which he feasted 7 days. In the tabernacle were 7 lamps. The golden candlesticks had 7 branches; 7 days were appointed for an atonement on the altar; and the priest's son was appointed to wear his father's garment 7 days. Naaman was commanded to wash 7 times in Jordan to cure his leprosy. Gehazi was ordered to look toward the sea 7 times, and at the 7th time he saw the wished-for cloud. The Shunamite's child sneezed 7 times before life was fully restored. In the 7th year of his reign, King Ahazuerus feasted 7 days, and on the 7th directed his 7 chamberlains to find a queen, who was allowed 7 maidens to attend her. Job's friends sat with him 7 days and 7 nights, and offered 7 bullocks and 7 rams as an atonement for their wickedness. David prayed that the wicked might be rewarded 7 fold in their doom. Solomon says that the fool is wiser in his own conceit than 7 men that can render a reason, and that when the wicked speaketh fair, there are 7 abominations in his heart. Nebuchadnezzar was 7 years a beast, and at the end of 7 years his kingdom was restored; and the fiery furnace was heated 7 times hotter to receive Shadrack, Mesheck, and Abednego.

The Scriptures are illustrated by 7 corrections, viz.: The widow's son by Elijah, the Shunamite's son by Elisha, the soldier when he touched the bones of Elisha, the daughter of the ruler of the synagogue, the son of the widow of Nain, Lazarus, and the Savior.

Enoch who was translated, was the 7th from Adam, and Jesus Christ, the 77th in a direct line. The Savior spoke 7 times from the cross, on which he remained 7 hours. He appeared 7 times afterward. In 7 times 7 days he sent the gift of the Holy Spirit. In the Lord's prayer are 7 petitions contained in 7 times 7 words.

In the Apocalypse we read of 7 churches, 7 candlesticks, 7 spirits, 7 stars, 7 trumpets, 7 plagues, 7 thunders, 7 vials, and 7 angels to pour them out upon the 7-headed monster, Antichrist.

MENTAL DISCIPLINE.

THERE are many who spend a life of mental effort, who nevertheless fail in attaining to a disciplined mind. This, however, is highly important, it is to the student what skill is to the mechanic. One may read all his days, and accumulate the richest and most valuable products of mind, but unless he possess the capacity of rendering them available, they will be utterly worthless! By the term, "mental discipline," the student understands that condition of the mental and moral faculties, which will at all times enable one to concentrate his attention, and fix his mental grasp upon any given subject without pain, almost without effort, and to accomplish his plan—whatever it may be, with perfect and complete success. There is a mental habitude which enables the mind to adjust itself to its subject with the most gratifying ease—all is regularity, system, precision, life. The productions of such minds appeal directly to the heart—the soul, in its clearest light and development, breathes and burns in every line, and we bow down and admire them as we do the astonishing productions of master geniuses, or the imposing grandeur and awful sublimity of Stromboli, with its lamps of eternal fire. The "myriad-minded" Shakespeare—he whom the world worships, whose lyre speaks to the heart—harsh and discordant though it sometimes is, stands forth as one of the most successful examples of mental discipline which it has ever been the fortune of the world to witness. His was the power to create—from nothingness he evoked a world, a universe of beauty—he "could enter upon any state, assume any character, feel the throbbings of every heart, and the aspirations of every soul." Nature was his study—his alma-mater. He was cramped by no rules—in the pure and pellucid fountain of his mighty spirit, nature was

mirrored in all the winning and majestic loveliness of her own immaculate self. "He set the diamond of his mind in pure gold." With him nature supplied the rules of art; the intuitive perception of his mind, rendered the dicta of the schools superfluous; and, at the high altar of his own bright thoughts, he elevated those majestic conceptions which, while his language falls familiarly upon the ear, will be the admiration and wonder of the world.

SORROW FOR THE DEAD.

THE sorrow for the dead is the only sorrow from which we refuse to be divorced. Every other wound we seek to heal; every other affliction to forget; but this wound we consider it a duty to keep open; this affliction we cherish and brood over in solitude. Where is the mother, who would willingly forget the infant that perished like a blossom from her arms, though every recollection is a pang? Where is the child that would willingly forget the most tender of parents, though to remember but to lament? Who, even in the hour of agony, would forget the friend over whom he mourns? Who, even when the tomb is closing upon the remains of her he most loved; when he feels his heart, as it were, crushed in the closing of its portal, would accept of consolation that must be bought by forgetfulness? No; the love which survives the tomb is one of the noblest attributes of the soul. If it has its woes, it has likewise its delights; and when the overwhelming burst of grief is calmed into the gentle tear of recollection; when the sudden anguish, and the convulsive agony over the present ruins of all that we most loved, is softened away into pensive meditation on all that it was in the days of its loveliness, who would root out such a sorrow from the heart? Though it may sometimes throw a passing cloud over the bright hour of gayety, or spread a deeper sadness over the hour of gloom, who would exchange it for the song of pleasure or the burst of revelry? No; there is a voice from the tomb sweeter than song—a remembrance of the dead to which we turn, even from the charms of the living.

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Oriental Women on Camels.

TRAVELLING IN THE EAST.



ERHAPS the highest excitement that life offers to the Mussulman, is the pilgrimage to Mecca: the lowliest condition, the most advanced age, or immeasurable distance—is no bar to its performance. From the interior of Africa and Hindostan, the shores, isles, and deserts of the east, an annual myriad advances to the tomb of the prophet. The departure of a caravan in the freshness of its strength and zeal, ere disease and misery have done their work, is a singular and splendid spectacle; the sacred white camel, gorgeously arrayed and attended, the guards, the banners, the hosts, of various nations, complexions, and languages, all pressing on with a lightness of heart, a freedom of step, a face full of the sedate fanaticism of their faith. The more humble and numerous portion of the pilgrims are the most devoted; to worship at the shrine, to wash away their sins, and earn a hadji's honor, is their strong and guiding hope—the prospect of traffic and

gain also animates the merchants, who, as well as the nobler pilgrims, are provided with servants, comforts, and even luxuries. But this pilgrimage is of admirable use in teaching men their utter helplessness, the vanity of earthly distinctions, “the rich and the poor meet together;” they weep in secret; “the servant is as his master.” The hour is sure to arrive, when the caravan, feeble and wasted, the courage lost, the enthusiasm a dream—is seen stealing over the desert, as if the angel of death sadly called them: when the poorer pilgrim, from his burning bed of sand, looks on the great and the luxurious, breathing faintly also, and the harem of the one, and the cottage of the other, flit before the failing eye. Perhaps the night brings the breeze or cloud, and they struggle on their way, till the water, fountain, or stream, is near; and its low sound is caught by every ear with an acuteness that misery only can give. Again all distinctions are forgotten, of sex, rank, and circumstance; the prince and the peasant kneel side by side, or prostrate, like Gideon's troop, drink insatiably, blessing the prophet and each other. The writer was once present at a scene of this kind, in a party, where one of the domestics, in his suffer-



An Encampment of Pilgrims.

ing, poured reproaches on his master; the rest were silent and dejected; they had walked from sunrise till noon over a soil utterly parched, and in an intolerable heat, no cloud in the sky, no moisture on the earth; the hills of white sand on the left seemed to glare on us like spectres: at last we reached a rapid and shallow stream, on whose opposite bank was a stone tower, where a few soldiers kept their lonely look-out against the Arabs. Too impatient to drink in the usual way, the party threw themselves on the shore, and plunging their faces in the wave, drank long and insatiably.

The track of the great caravan, during an unfortunate season, is at intervals strewed with victims; the first are old and the sickly; wasted by the cold as well as the fiery blasts, the bodies rest on the sands, without corruption, such is the excessive purity of the air; to those who have friends and property, a miserable honor is shown.

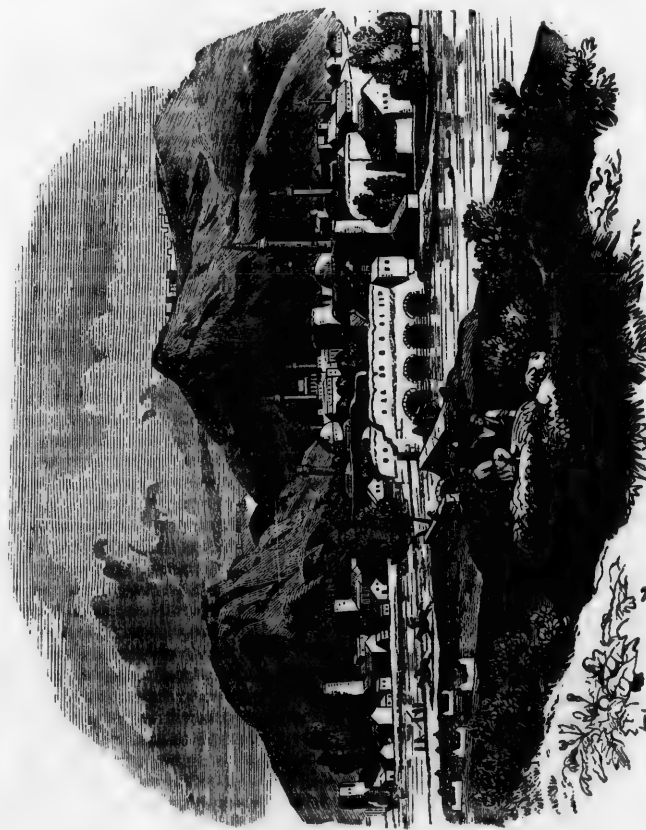
"Just before we reached the wells in this desert," says an Arabian traveller, "we passed by the tomb of a distinguished person, who died on this spot. His companions having enclosed the naked corpse within low walls of loose stones, had covered it over with a large block. The dryness of the air had preserved the corpse in the most perfect state. Looking at it through the interstices of the stones which enveloped it, it appeared to me a more perfect mummy than any I had seen in Egypt. The mouth was wide open, and our guide related that the man had died for want of water, though so near the wells."

It is possible, by fortunate arrangements, to visit the tomb of Mecca without serious calamity, save some inroads on the health and beauty of the ladies, who actually went in this caravan, with an enterprise, and perhaps religious zeal, not very usual among oriental women. Rarely, indeed, do the latter venture their round forms and exquisitely clear and colorless complexions, to the simoom's deadly sweep; to go forth from the harem, into which the light falls through richly stained glass—to be by night the inmate of a tent during weeks and months, and the prey of the sun and wind by day; can the thickest veils, the most skilful precautions, pre-

vent mischief to the eyes, the cheeks, the hair; the limbs will grow attenuated, and the spirits, unused to such stern excitement, languid and broken.

The conductor of this small caravan, to whom the ladies belonged, was a noble Turk, a native of Constantinople, whence he had proceeded through the rich provinces of Asia Minor to Damascus, thence by slow journeys through the deserts to the Red sea, and there embarked for Jidda, which is six days' journey from Mecca. They were now on their return, their consciences pacified, their imaginations bewildered, their memories stored. The trials of the way overpast, they were resting among the ruins of Antioch, musing, perhaps, on the tales of peril and change, to tell to the calm and luxurious circles of Constantinople—for which they were in a short time to sail.

The Turkish nobleman and two of his friends were seated on a rich carpet, each smoking the hookah, and sipping coffee; the baggage scattered on the ground, the horses and camels grazing, some tents open; groups of pilgrims were conversing, or sauntering about the shores. The tents of the women, closely curtained, were pitched in the rear, no less than six being occupied by the harem and its numerous attendants. The iniquates had travelled across the desert in houdas, a covered or open divan, placed on the back of the camel, and either rudely or luxuriously furnished. The writer met, one day, in the deserts east of the Red sea, a Turkish gentleman of Cairo, returning, quite alone, from Mecca; he was seated in a houda, his solitary camel, seen from afar, the rider reclining as on a sofa, musing indolently, had a droll appearance in so desolate a scene: the little clouds of smoke that rose at intervals from his pipe into the pure air, told of his progress accurately; it was by no means unlike the slow movement of a small steam-carriage over the sands, save that no sound came forth; the Arab guide, walking at the head of the camel, was as silent as his master; even his melancholy song was hushed. But the Ottoman ladies, who had walked nine times round the adored tomb, kissed the black and miraculous stone of the Caaba, and drank of the well Zemzem—will



Ancient City of Antioch.

be marked and envied beings for the rest of their lives; in the divans, the baths, the promenades of the city—the words of the fair hadjés will be received as oracles, and companies will hang as greedily upon them, and even more so, than their lords on those of the Arab story-tellers, for they will have the charm of truth. No gain-saying or skepticism can be feared from other ladies, who have never strayed from the banks of the Bosphorus, or heard more awful sounds than the murmur of its waves, or their own fountains.

The Mahometans, from the tomb of their prophet—halting on the ruins of Antioch, presented a mournful comment on the decline of the power and glory of this world, as well as on that of the pure and earliest church of God. The two greatest of the apostles preached, Ignatius taught, and offered himself as a martyr in Antioch; and great was the prosperity and the joy, during many ages, of its Christian people.

And now—the lofty minarets of the mosques were seen above the broken walls of the ancient city; there are some remains of a church, said to be that of Chrysostom; there are tombs also, beneath the shade of the trees, but they do not contain the ashes of the early Christians, the stone shaft carved, and turban, show them to be the sepulchres of the Turks. The valley of the Orontes is very partially cultivated, save in the immediate vicinity of the river; the range of Mount Amanus, the Amana of scripture, rises boldly beyond; far to the right, at a few hours' distance, is the path in this mountain, through which Darius marched his mighty army from the plains of Assyria to the coasts of Cilicia, a few days before the battle of Issus.

To the course of the Orontes new interest is now imparted by the enterprise of Colonel Chesney, who begins his overland communication with India at Suadeah, where this ancient river falls into the sea. From this first footstep on the lonely shore, covered with the ruins of Seleucia, what a career of industry, intelligence, and prosperity, may be expected to arise! Steam navigation and railroads will traverse the silent plains and the famous but forsaken rivers; not Cleopatra in her bark

of purple and gold on the Cydnus, excited more surprise than will follow the first steamboat on the Orontes—the herald to the admiring people of a new era in their condition, in knowledge, in comfort, in faith! The general diffusion of instruction among a people, from whom it has been so long and so utterly withheld, will be the gradual but certain result of the rapid facilities of intercourse with England and America; the great valley of the Orontes, from the vicinity of Damascus to that of Aleppo, is full of modern as well as ancient interest; there are several large and wealthy towns, where manufactures might be introduced, and a regular commercial intercourse established; the cultivation of some districts is excellent, and most are capable of it; but the people are a prey to indolence and apathy; they want a new stimulus. And this stimulus will be felt when new sources of trade, of enjoyment, of energy, shall be opened to them. The improvements and changes introduced by the conqueror, Ibrahim Pacha, may benefit his coffers, not his subjects. Railroads and steam-carriages will be the greatest blessings to these rich and beautiful countries; on their rapid wheels devolve greater changes than on the march of armies. From Suadeah to the Euphrates, and down its waters to the Persian gulf, will no longer be the painful and interminable journey that most undertake from necessity, few for pleasure; in a few years, the traveller, instead of creeping on a camel at three miles an hour, wasted by sun and wind, may find himself rolling along the plains of Babylon with the speed of thought, while mounds, towers, and tumuli, vanish by, like things seen in a dream; the man of science, who lingers among the dim ruins, the merchant who tarries to buy and sell, may no longer dread the plundering Kurd or Bedouin, when his country's flag heaves in sight far over the plain, on that ancient river Euphrates, as daringly as when

"Her march was on the mountain wave,
Her home was on the deep."

The commercial caravans, it is evident, afford the great means of interchanging commodities between countries which would otherwise be cut off from nearly all commercial intercourse. The caravans of



March of a Caravan..

Egypt bring to Cairo ostrich feathers, gum, gold-dust, and ivory, from Abyssinia and the countries beyond it; while those of Arabia exchange the spices, coffee, perfumes, and muslin of Hindostan. By means of caravans, an interchange of commodities is kept up between China and central Asia; and at the fair of Nijnei Novgorod, tea, brought originally to Kiachta by caravans which perform a land journey of seventy or ninety days, is distributed throughout the Russian empire.

When deserts are to be crossed, the only possible means of transit is by land; but the extension of this mode of transport to the capital of the Russian empire, indicates truly the childhood of Russian civilization. But Asia and Africa are the indigencous countries of camels and caravans, which are the means of advancing and promoting the business, and even the higher interests of life. Without commerce the inhabitants of many parts of Asia and Africa would be condemned to a state of existence deprived of almost every enjoyment; but the camel, which has been most bountifully bestowed upon these arid regions, has facilitated men's intercourse with one another, though the state of these countries has rendered it necessary for merchants and traders to consort with each other in large companies for mutual protection, just as in time of war fleets of merchantmen proceed under convoy. The caravans which travel from the coasts of Egypt, Tripoli, Tunis, Algiers, and Morocco, to Timbuctoo, the great mart of central Africa, are represented as being eighteen weeks in proceeding from the border of the desert. They meet caravans from places in the interior which have never been reached by Europeans. The goods displayed in the markets of Thibet, and those which come from the remotest recesses of Africa, are thus exchanged. The African caravans, it is said, carry coal through the desert.

In the year 1254, the caravan of the mother of Moslom b'illah, the last of the Abbases, was composed of 120,000 camels; but the Syrian caravan, which is now the largest, did not number more than 15,000 camels in 1814, according to Burckhardt.

THE PAMPAS OF BUENOS AYRES.



LL that tract of country south of the Parana river, and of latitude 33 south, extending west of the Andes, goes by the name of the Pampas, and is a level country, formed apparently by the washings of the great tributaries of the La Plata, without a stone, or rock, or a hill, more than a gentle elevation of a few feet, so level that a carriage can go over the fields in any direction, and without a single tree or bush. It is one immense meadow, covered with luxuriant grass, mingled in the spring time, with a thousand varieties of beautiful flowers. The winter's night is rarely so cold as to form ice of the thickness of glass, and snow is never seen. The thermometer is never below thirty, or above ninety. This plain is but partly settled. A line drawn north and south, one hundred and fifty miles west of Buenos Ayres, and from the Parana river, to three hundred miles south of that city, embraces the portion of the country under civilized rule. Over the rest rove the Pampa Indians, who go as far south as Patagonia, in summer, and who come north in winter. Clothed generally in skins, eating horseflesh, and robbing and murdering wherever opportunity offers, they are the nearest kin to brutes, of any race of Indians that exist on the American continent. The settled part is divided into estates, generally containing two to five square leagues of land. A league contains 5,700 acres, on which the principal business is raising cattle, sheep, and horses. Each land-owner has a peculiar brand, which is registered at the office in the city, and all animals with that brand are his property. The owners drive together all the animals once a year, and brand the young; and when they are sold, they are branded again, or counter-marked, and then marked with the mark of the new owner. The animals are driven up to pens, generally near the centre of the estate, every night, and they soon get into the habit of eating away from their

sleeping ground until noon, and then turning their steps toward home. One square league will support ten thousand animals, although it is rare that so many are put within that space. The calculations early last year, were, that in the state of Buenos Ayres there were 5,000,000 cattle, 4,000,000 sheep, and 1,000,000 horses. Cattle are worth about three and a half silver dollars each, when selected for market. The owner sells a drove. All the animals are driven together, and all the neighbors are invited to the frolic of separating cattle for market. A most exciting frolic it is, for the cattle are not tame, and it is not very safe to approach them, except on horseback. About twenty tame working cattle are stationed about half a mile from the herd. The purchaser points out an animal to be taken out, and three horsemen dash in among them; the animal runs, and the horsemen manage to get on each side of, and behind him. A race begins; the riders, shouting like madmen, so manage as to bring the animal to the spot where the tame oxen are quietly grazing, when, reining in their horses, he darts ahead, and finding he is no longer pursued, stops, evidently astonished at the operation. In this way, twenty or thirty men will select a large number in a day. Sometimes a "novillo" or steer will give them a chase of three or four miles before they can bring him to the right spot. The drove selected, the head driver gets a certificate from the justice of peace that he has examined the marks, and that the cattle are sold by the true owners, with which he starts for town, sometimes 150 or 200 miles, travelling very slowly, and sleeping on the grass near them. Great care must be taken that they do not mix with herds as they pass along, as there are no fences or ditches to separate one's land from his neighbor's.

Arriving at the outskirts of the city of Buenos Ayres, they pass to the great salting establishments, where they are driven into a pen. A lasso or noose is thrown over the horns, and by a windlass the animal is drawn up to a post, where a man stands, and with a sharp-pointed knife pierces the spine, back of the horns—the animal drops upon a rail truck, and is drawn off to the skinning ground, where

the hide is taken off, the beef cut from the bones and hung up to drain, preparatory to salting, and the tallow all taken out, all within five minutes. The hides are salted and shipped, principally to England; the beef is salted and then dried, and shipped in bulk to Brazil and Cuba: the bones, horns, and hoofs, are shipped to Europe; and the hair from the tails, for mattresses, and the sinews of the legs, for glue, are exported to the United States. About 600,000 cattle are annually killed for the beef, which is cured for export, and about 200,000 are killed and the beef either steamed out for the fat, or thrown away. The export of hides from Buenos Ayres is 1,200,000 per annum. Those for the United States are the lighter kinds, that come from the interior states of the Argentine confederation. The richest cattle-owners are Nicholas Anchorena and his brother Thomas, who sell 70,000 each year, and have about 300,000, and 50,000 horses. There are several who own over 100,000, and the country remaining tranquil and in peace, the number would rapidly increase. The other states of the confederation are not so settled, but have about 3,500,000 cattle; and the republic of Uruguay and the southern part of Brazil (Rio Grande) have 5,000,000 more, making in the country near the La Plata, 13,500,000. The export of hides to Europe and the United States is about 2,500,000 annually.

Sheep have been much neglected until within fifteen years past. Formerly they were considered as worth but a few cents each, and the story of their being used to burn brick with, in former times, is true. The common wool is now worth, when washed, about six cents the pound. Within fifteen years many persons have turned their attention to importing fine sheep, and crossing them with the sheep of the Pampas. Over ten thousand full blood merino sheep have been brought to the country, from Germany and the United States. The pure blood sheep born in the country, and taken care of, deteriorate very little in the fineness of the wool, and some of the sheep that are crossed three quarters, or seven eighths full blood, produce very fine wool. The largest sheep estate is that of Mr. Sheridan, an Irish gentle-

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man, where there will be one hundred and fifty thousand sheared this year, all of them from one half to full blood merino. This estate is about fifty miles south of Buenos Ayres, contains seven league square of land, and is called, "Estancia de los Saiones," or "Estate of the Sax-onies"—it being devoted entirely to the raising of sheep, which are divided generally into flocks of 3,000 to 5,000 each. A man or boy on horseback, always accompanies them. They require but little care, beyond letting them out of the pen, and driving them back, every day in the year. The soil of the Pampas is impregnated with saltpetre, and the water is brackish. To this is attributed the absence of foot rot and other diseases among sheep. The shearing season commences the middle of October, the shearing being mostly done by women. Some of them will shear fifteen, and even twenty sheep in a day. The level nature of the country and the absence of running water, make it impossible to wash the wool on the sheep's back. It is rolled up as sheared, and with considerable dirt, put into carts, which take it to town, where it is valued and shipped. The greatest drawback to the producing of wool on the Pampas, is the small burr which adheres to the wool. It is the seed of a species of clover, of which the sheep are very fond, and in some parts of the country there is so much of it, as to render the wool of little value. A small shrub that grows two or three feet high, produces a burr as large as a marble, which is easily taken out. The manes and tails of horses feeding among this, are frequently an enormous mass of burr of many pounds weight. The common wool of the country is generally washed after shearing, it being of little importance to keep the fleeces entire. The wool washed at Buenos Ayres has a harsh, crispy feeling, arising from the water. The Southdown sheep are hardiest, and increase the fastest. Don Faustino Xemenes has 60,000, on his estate, twenty miles from the city, but generally the proprietors have crossed with Saxony. The wool from Cordova, one of the interior states of the confederation, is free from burr, and a much cleaner kind than the Pampas wool. There was exported from

Buenos Ayres the past season 20,000,000 pounds of wool, of which two thirds went to the United States. This was not all the product of that state, as part of it came from Cordova, Entre Rios, and the republic of Uruguay.

Horses of the Pampas are a small race, originally from Spain. They are most excellent saddle-horses, and have great bottom, but are not of sufficient weight for carts or carriages. They have increased to such an extent, as to be of little value except for the hide. Horses are the principal munition of war, and all are subject to be taken by the government. An army marches with three horses for each soldier, and the Argentine government have a reserve of 90,000. All battles on the Pampas are decided by the cavalry and light artillery, which is equal to any in the world; and the success of the Argentines in all their wars, may be ascribed to this cause.

Every estate has one hundred horses and mares to every one thousand cattle, and in some parts the proportion is larger. Formerly, government allowed horses to be killed and the carcasses steamed, by which process, at times, fifty pounds of oil is extracted, which is shipped to the United States, and there sold as neat's foot oil. Fearing that the stock of horses would decrease, this has been prohibited, and horses are of little value; a flock of them, with mares and colts, not being worth more than seventy-five cents each. Tamed and broken for the saddle, they are worth three to five dollars. Fancy ones bring fancy prices, and occasionally a horse will sell as high as one hundred dollars, but it is very rare. Like the cattle, they are all branded, which gives strangers a very disagreeable impression at first.

Wheat and corn are now raised, sufficient for the consumption of the country, and at times they are exported. The farmers keep the cattle from their fields by boys on horseback, driving them away—as fences and ditches are rare. There are immense quantities of thistles, which in spring shoot up to six or eight feet. The sun dries the stalks, and they are used for fires in the country. Many of the estates have squares of peach-trees, which are cut down every four years.

Peachwood is almost the only firewood of the city, except what is brought from the north side of the river and Brazil; and the trees planted on the islands of the Parana river by the Jesuits, have now spread over its thousand islands, and the towns on its banks are supplied with fruit and firewood from them. The fruit is a variety of cling-stones, not very large, but of good flavor. The soil is so rich that potatoes require foreign seed. The third crop is so watery as to be unfit for eating. Beans, peas, and most vegetables, are raised in great abundance, particularly tomatoes.

The Pampas abound in game in almost incredible quantities, and animals with valuable skins; hares, and armadillos, that are considered a great luxury for eating; the biscatchia, a species of the prairie-dog; the nutria, a species of muskrat, the fur being a substitute for beaver, and of whose skins 500,000 are annually exported; ostriches, and every species of crane; the scarlet ibis, flamingoes, and spoonbills, which are sometimes seen in thousands; curlew, plover, and snipe, of various classes, and in great abundance. The officers of our navy would frequently bag fifty brace in a day's shooting. Two kinds of partridges and pheasants, double the size of ours; swans and wild geese, in such quantities as in winter to literally make parts of the lakes look white. Thirty-two different and distinct kinds of wild duck have been found on the Pampas. Some of them have been pronounced equal to canvass-backs. The rivers abound in fish to an incredible extent. About twenty varieties, and all very good, are to be found in the market. A climate with but few changes, and of delightful temperature. It only requires peace, to convert these Pampas into a flourishing agricultural country. Millions can be sustained where now only thousands exist.

HOME.

ATTACHMENT to the place of his abode, whether an innate principle of the human mind or merely the result of association, is a feeling universally observable in man. In the minds of those whose home is the

place of their birth, it is naturally connected with their first experience of life, and light, and health; a mother's fondness and a father's care; the affection of relatives, the sports of boyhood; the occupations of riper youth; the first dawns of hope, and aspirations after happiness; with the season when life, and futurity, and all things seemed fresh and beautiful, ere the disappointments of maturer years had chilled the scene of our birth and early life, still it has much to endear it to our hearts; it is linked inseparably with all our pleasures and pursuits; the thought of home gives us strength to labor, and fortitude to endure, thither do we look for comfort, there do we take refuge from every external evil; there are gathered together those who are more precious to us than ourselves; those who are not less beloved because they are the friends more of sympathy and choice than of natural consanguinity; in ten thousand ways are our feelings, our thoughts, our actions, identified with home; to it we are bound by ties which increase in number and in strength with increasing years.

THE FAIR OF REYKIARIK.



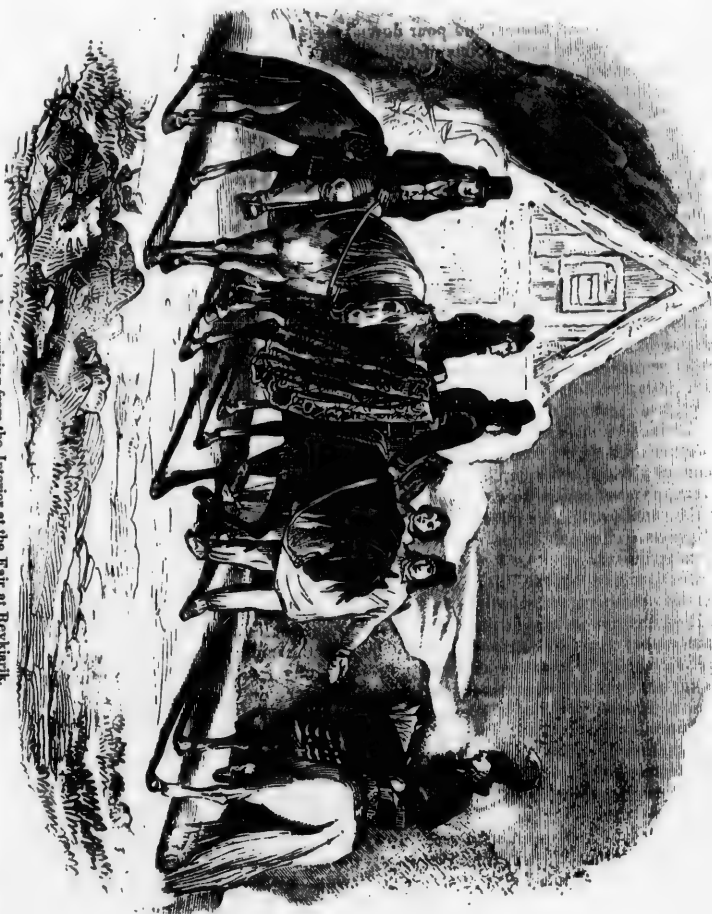
WO things have remarkably distinguished Iceland—the aspect and nature of the island, and the character of its inhabitants. In no quarter of the globe do we find crowded within the same extent of surface such a number of ignivomous mountains, so many boiling springs, or such immense tracts of lava, as here arrest the attention of the traveller. The general aspect of the country is the most rugged and dreary imaginable. On every side appear marks of confusion and devastation, or the tremendous sources of these evils in the yawning craters of huge and menacing volcanoes. Nor is the mind of a spectator relieved from the disagreeable emotions arising from reflection

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Icelanders writing from the Interior at the Fair at Reykjavik.



on the subterraneous fires which are raging beneath him, by a temporary survey of the huge mountains of perpetual ice by which he is surrounded. These very masses, which naturally exclude the most distant idea of heat, are frequently seen to emit smoke and flames, and pour down upon the plains immense floods of boiling mud and water, or red-hot torrents of devouring lava. Yet this rugged and dangerous island, so far from being uninhabited, or inhabited only by a people in the lowest state of intellectual and physical improvement, has been long famous for its literature and its state of comparative civilization. It had a representative form of government, and its inhabitants were an enlightened people, when Europe was but advancing from darkness. And though it is now thrown into the shade, because Europe has gone forward, while Iceland has become a dependency, lost its representative government, and been afflicted with evils, arising from furious volcanic eruptions, earthquakes, disease, &c.; still the Icelanders are an educated people, to a degree which is extraordinary when contrasted with their situation. Dr. Henderson created much interest in Britain by the proofs which he afforded of the intelligence of the Icelanders. The following is an instance: "As I rode along, I was entertained by the interesting conversation of a peasant, who was travelling to Reykiarik in order to dispose of his country produce. The knowledge which he discovered of the geography and politics of Britain quite astonished me. He gave me a long detail of the events that transpired during the usurpation of Cromwell, and proposed several questions relative to the Thames, Tay, Forth, &c. His acquaintance with these things he had chiefly derived from Danish books; and having lately fallen in with a work in German, he began to learn that language, in order to make himself master of its contents."

Reykiarik, to which this peasant was travelling to dispose of his produce, is the capital of Iceland, and the only place approaching to our idea of a town in the island. Speaking of its cathedral, Mr. Barrow says: "Under the roof of the church is the public library, said to con-

tain about 6,000 volumes, to which the inhabitants have free access, being allowed, under certain restrictions, to have books at their own houses; and I was assured that the residents were generally very fond of reading. The books consisted mostly of general and ecclesiastical history, in the northern languages—German, Swedish, Danish, and Norwegian; such is related to Iceland, their sagas and their eddas; and it contained also a few English books, generally the writings of our best poets, and also a collection of the Greek and Latin classics, besides some manuscripts, chiefly theological, the production of the clergy of the island. The Icelanders were once deservedly famed for their literary productions; and it is pleasing to find that they still keep alive the spirit of research and that literary pursuit for which their ancestors were distinguished."

Reykiarik lies on the western side of Iceland. The southwest corner of the island projects considerably into the sea, forming the southern side or boundary of a large bay, called by Dr. Henderson and others Faxó Fiord.

A stranger who first approaches the shore on which Reykiarik stands, and has not prepared himself by reading for what he may expect, beyond the simple fact that it is the capital of Iceland, can not possibly behold what he sees of it—and he sees at least the better half of the whole from the anchorage—without experiencing a strong feeling of disappointment. He perceives only a long row of houses, or rather the upper parts of houses, running parallel to and close behind a rising beach of black shingle, their red or brown roofs being the most conspicuous, and the tops of the doors only, and perhaps about half of a row of windows, peeping above the said beach, but he sees enough of them to satisfy himself that they are of a low, mean character, and only of one story in height. On each extremity of this line of houses he will observe a rising eminence, scarcely deserving the name of a hill, on which he will perceive a number of sod or turf huts raised a little, and but a little, above the level of the ground; their roofs, and generally their sides too, verdant enough, and well clothed with

grass—the abodes chiefly of fishermen, laborers in the merchants' employ, and idlers, of which there were not a few at this time sauntering about the town. . . . In addition to the row of houses seen from the harbor, another row made its appearance behind it—perhaps I ought to say two imperfect rows, forming a sort of street, running at right angles with the former, near its western extremity. This street or space between the houses was encumbered with the same kind of rocks starting out of the soil that we observed in the plain. In this portion of the town is the residence of the Landfogued, or treasurer; and near the farthest extremity is a sort of tavern or society-house, where the Danish and other mercantile residents assemble, forming a kind of club, where they play billiards and other games, and have dinners, balls, and other amusements occasionally.

The houses on the sea-line are generally those of the merchants, who are chiefly Danes; they are built, as in Norway, of wood, and covered with shingles or planks, and to each is attached a storehouse for their different articles of merchandise. The only stone-built house is that of the governor, situated at the eastern extremity of the line, and this building was formerly the workhouse—not for the maintenance of the indigent poor, but made use of rather as the house of correction. The episcopal residence is near to the coast, considerably to the eastward of that of the governor—a very comfortable house, built of brick, and white-washed. There is a hot-spring in the neighborhood of Reykiarík, which sends up a continual column of steam, and which may have given name to the capital—the smoking village.

The grand annual event of Reykiarík is the fair, which brings together the peasantry from all parts of the country. After the long winter, there is a bustle of preparation among the Icelanders. The melting of the snow from the ground allows the horses to get a little grass, on which they thrive well, and rapidly recover from the lean and miserable condition into which their scanty winter fare had thrown them. The fleeces are taken from the sheep; the roads are passable, if roads they can be called, where not a wheel-carriage of any

kind can be used; and the peasantry, having nothing particular to occupy them till the hay harvest sets in, prepare, in the month of June, for the fair of Reykiarík. They bring down in boxes or little chests, or skin-bags, as it may happen, slung across their horses' backs, wool and woolen manufactured goods, such as cloth, knitted stockings, and mittens, butter, close pressed and packed in barrels, skins of cattle, calves, sheep and lambs, and tallow.

The peasantry encamp in the neighborhood of Reykiarík during the fair, and the short period of its duration is one of great bustle and activity. It affords the only opportunity of seeing the population of Iceland. During the rest of the summer Reykiarík is tolerable, and affords a little society; but after the merchants depart, and the winter sets in, it is one of the dreariest places on the globe.

POWER OF KINDNESS.



O man hath measured it; for it is boundless; no man hath seen its death, for it is eternal. In all ages of the world, in every clime, among every kind, it hath shone out—a bright

and beautiful star, a beaming glory!

See Joseph in the hands of his wicked brethren. For a few pieces of paltry silver, they sold him into Egypt. Providence in kindness broke the bands which held him in slavery, and made him a ruler there. Famine spread over the land her dark mantle, and the cruel brethren of Joseph hungered. They went to Egypt for corn. How now acted Joseph? More than once he filled their sacks, and returned them their money, and then made himself known. "I am Joseph, your brother, whom you sold into Egypt!" Here was kindness, forgiveness. And it crushed to death the spirit of jealousy, that had once made him a slave. He had conquered!

Look at the case of Saul and David.

Bitter and blasting jealousy filled the heart of Saul, and he "sought to take the young man's life." With hellish hate, he hunted him, even to the dens and caves of the earth. But David conquered his enemy; even the proud spirit of haughty Saul he humbled. And how! Not with sword and spears, not with harsh and coarse contumely, for these did never touch the heart with gentle influence. No, but with a weapon as simple as the shepherd's sling, yet sure as the arrow of death. 'Twas kindness! This killed rankling hatred, and left Saul to like. And when it had done its work, Saul said to David: "Thou art more righteous than I, for thou hast rewarded me good, whereas I rewarded thee evil." Was not here a victory—more glorious, more godlike than a Wellington ever knew?

Come further down in the world's history, and tell me, what word of all those spoken by the "meek and lowly Jesus,"—"the Prince of peace," the "Savior of the world," was best calculated to soften and subdue the hard hearts of his persecutors? Are we not pointed to the cross on Calvary? Are we not asked to listen to the soft sweet tones of that voice?—"Father, forgive them!" O, here was kindness!

Was not the kindness exhibited by the martyr Stephen, when he cried aloud, "Lord, lay not this sin to their charge," a holy triumph over his persecutors?

Look over our extended country at the present day. What has changed those miserable hovels of other days, where misery and wretchedness had dwelt, into the neat and beautiful abodes of plenty and peace? What has kindled anew the flame of love and affection, in hearts long estranged and freezing with coldness? What has made happy the homes of thousands of wives and tens of thousands of children? What, in short, has been the great propellant of the temperance reformation, which has carried joy and gladness all over our land? What, but kindness?

Reader, have you an enemy, whom you would make a friend—a neighbor, who needs repentance—a fallen brother, whom you would restore to sobriety and virtue? Forget not the power of KINDNESS!

WHITE OR BARN OWL.



HE most common observer can not fail to remark that there is a very considerable affinity between the falcon and owl genus of birds. Owls may indeed be regarded as

a sort of nocturnal hawks; differing from them, much in the same way that the moth differs from the butterfly. Ornithologists enumerate eighty species of owls; but they admit that the number accurately known is less numerous; the same bird, under a changed aspect, having in some instances been set down as a distinct species. The following may be stated as the characteristics in which they all agree. The bill is crooked, as in the falcons, but is not usually furnished with a cere; the nostrils are oblong, and covered with bristly feathers; the head is large, and so are the eyes and the openings of the ears; the tongue is divided; the toes are placed three before and one behind, the exterior toe capable of being occasionally bent backward; the exterior edge of one or more of the greater quills is serrated in most of the species. There are a few species which can see in the daytime, and are in the habit of then taking their prey; but owls are generally nocturnal birds, most of them seeking their prey by night, or rather in the twilight, at which time, or in the gray of the morning, they appear to distinguish objects best. There is no evidence that they can see when the night is very dark; the time, therefore, allowed them to hunt for prey is very limited, except on moonlight or other favorable nights, when they may be observed to seek their prey from night to morning. Limited as their time of providing for their wants usually is, they enjoy advantages which enable them to receive an adequate provision in a comparatively short time.

The beautiful species represented in our engraving is the common white or barn owl, called by some naturalists *strix flammea*, and by others *aluco flammea*.

The downy softness and remarkable elegance of the plumage of this owl are entitled to more admiration than they seem

BARN OWL.

The most common observer can not fail to mark that there is very considerable similarity between the screech owl and owl genus birds. Owls may indeed be regarded as a distinct order; differing from other birds in the way that the mouth is closed. Ornithologists divide them into two species of owls; but some number accurately as one; the same bird, in fact, having in some cases as a distinct species may be stated as the fact they all agree. In the falcons, but with a cere; the beak is covered with bristles large, and so are the edges of the ears; the feet are placed behind, the exterior toe occasionally bent, the edge of one or the other is serrated in. There are a few in the daytime, and taking their prey; they are nocturnal birds, and take their prey by night, at which time, or during the night, they appear best. There is no doubt when the night is therefore, allowed to be very limited, except other favorable circumstances may be observed to night to morning, providing for their enjoyment advantages receive an adequate and lively short time. They are represented in common white or brown naturalists *Strix aluco flammea*. and remarkable of this owl are more than they seem



White or Barn Owl.

to have obtained. Superstition on the one hand, and the commonness of the bird on the other, seem to have prevented the beauty of the white owl from being duly appreciated. We shall not minutely describe the appearance of so common a bird, but may observe that the plumage is generally of a reddish-yellow color with gray variegations, having black and white spots down the shafts of the feathers, and the breast and belly white, sometimes yellowish, and occasionally marked by a few blackish or dusky spots. The bill is straight to near the tip, instead of being arched from base to point as in the other species. The large eyes, the irides of which vary from nearly black to yellow, are surrounded by a large circle of soft white feathers; but the ruff is edged by a rufous or chestnut verge intermixed with white. The legs are feathered to the toes, which are covered with fine hair.

This species, with some variation from climate, is very extensively diffused over the world. It is well known in different parts of Asia, and in both North and South America.

The white owls chiefly live upon mice, which they swallow whole; but they will often destroy young birds. Mr. White, the author of the "Natural History of Selborne," mentions a pair, which infested a dove-house, and made great havoc among the young pigeons. This owl breeds in hollow trees, near farm-houses, and frequently in barns, or under the eaves of a church or other old building. It does not make any regular nest, but lays three or four eggs upon some woolly or downy substance placed in a very slovenly manner. It should be observed that these birds remain in barns, hay-lofts, and other out-houses, during the greater part of the year, but take to the eaves of churches, holes in lofty buildings, and the hollows of trees, in the breeding season. They are almost exclusively found in inhabited districts, and their utility in clearing barns of mice renders their presence welcome to the farmer.

White owls are said to scream horribly as they fly along; from this screaming probably arose the imaginary species of screech owl, which the superstitious think attends the windows of dying persons.

THE EYE.



WE have, in another place, incidentally remarked, that the eye indicates the holier emotions. In all stages of society, and in every clime, the posture and expression of reverence have been the same. The works of the great masters, who have represented the more sublime passions of men, may be adduced as evidences: by the upturned direction of the eyes, and a correspondence of feature and attitude, they address us in language intelligible to all mankind. The humble posture and raised eyes are natural, whether in the darkened chamber or under the open vault of heaven.

On first consideration, it seems merely consistent, that when pious thoughts prevail, man should turn his eyes from things earthly to the purer objects above. But there is a reason for this, which is every way worthy of attention. When subject to particular influences, the natural position of the eyeballs is to be directed upward. In sleep, languor and depression, or when affected with strong emotions, the eyes naturally and insensibly roll upward. The action is not a voluntary one; it is irresistible. Hence, in reverence, in devotion, in agony of mind, in all sentiments of pity, in bodily pain with fear of death, the eyes assume that position.

Let us explain by what muscles the eyes are so revolved. There are two sets of muscles which govern the motions of the eyeball. Four straight muscles, attached at cardinal points, by combining their action, move it in every direction required for vision, and these muscles are subject to the will. When the straight muscles, from weariness or exhaustion, cease to guide the eye, two other muscles operate to roll it upward under the eyelid: these are the oblique muscles. Accordingly, in sleep, in fainting, in approaching death, when the four voluntary muscles resign their action, and insensibility creeps over the retina, the oblique muscles prevail, and the pupil is revolved,

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so as to expose only the white of the eye. It is so far consolatory to reflect, that the apparent agony indicated by this direction of the eyes, in fainting or the approach of death, is the effect of encroaching insensibility—of objects impressed on the nerve of vision being no longer perceived.

We thus see that when wrapt in devo-
tional feelings, and when outward im-
pressions are unheeded, the eyes are
raised, by an action neither taught nor ac-
quired. It is by this instinctive motion
we are led to bow with humility—to look
upward in prayer, and to regard the visible
heavens as the seat of God.

"Prayer is the upward glancing of the eye,
When none but God is near."

Although the savage does not always
distinguish God from the heavens above
him, this direction of the eye would ap-
pear to be the source of the universal be-
lief that the Supreme Being has his throne
above. The idolatrous negro in praying
for rice and yams, or that he may be ac-
tive and swift, lifts up his eyes to the
canopy of the sky. So, in intercourse
with God, although we are taught that our
globe is ever revolving, though religion
inculcates that the Almighty is every-
where, yet, under the influence of this
position of the eye, which is no doubt
designed for a purpose—we seek him on
high. "I will lift up mine eyes unto the
hills whence cometh my help."

See, then, how this property of our
bodily frame has influenced our opinions
and belief; our conceptions of the Deity,
our religious observances, and daily habits.

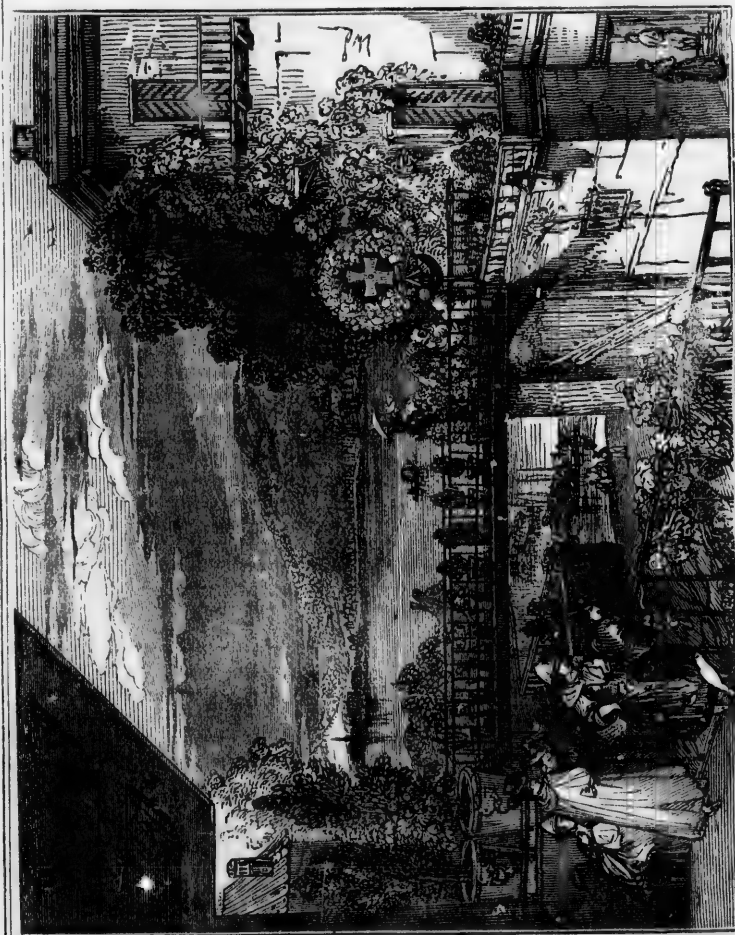
course, below the towns of Arona and
Sesto, it becomes so narrow as to look
rather like a stately river than a lake. Its
greatest breadth is at Baveno, where, turn-
ing the promontory of Intra and Palanza,
it forms a deep bold bay. The distance
from Baveno on the western side to Lave-
no, on the eastern shore, is not much
short of seven miles, and at either of these
points it presents a magnificent sheet of
water, and the most picturesque combina-
tion of islands, hills, and mountains. It
is fortunate that these two pleasant towns,
which are built on the very margin of the
lake, and present the finest views of it,
lie immediately on the high road of travel-
lers. In going southward from Switzer-
land, and crossing the Alps by the grand
Simplon road, the tourist descends sud-
denly on Duomo d'Ossola, at the very foot
of the Alps, and a few hours afterward he
reaches the posting town of Baveno, where
the first burst of the scene is like enchant-
ment. In coming northward from Milan,
by Varese, with its little miniature lake,
that lies sleeping among vineyards, a fine
posting road leads to Laveno, where it
stops, and thence, after admiring the
reverse of the beautiful picture as seen
from the opposite shore, he can embark,
cross the lake to the islands and Baveno,
and then continue his route by the Sim-
plon. Year after year hundreds of travel-
lers make their first acquaintance with the
Lago Maggiore at one of these two points.

The views from the windows and ter-
races of the inn at Baveno, which com-
mands the whole of the inlet or bay we
have mentioned, and in which the Bor-
romeo islands are grouped, are eminently
beautiful; but to obtain the true point of
sight, if he does not intend to cross over
to Laveno, the tourist should take a boat
and row a little beyond the islands to the
middle of the lake. There the bosom of
the lake, the gentle shores, and the green
hills dotted with towns, villages, and
country-seats, and the granite mountains
of Baveno and Montorfano disclose them-
selves with the happiest effect; on one
side (to the south) the mountains decline
into bosomy hills, which are gradually lost
in the rich and boundless plain of Lom-
bardy, while on the other hand (to the
north) the eternal-looking Alps, with their

THE LAGO MAGGIORE.



AGO Maggiore is
the largest of all
of those beautiful
lakes that lie at the
foot of the Alps,
on the Italian side.
It is about forty-
five English miles
long, but its breadth
is small in com-
parison to its length, varying from two to
five miles, while in the lower part of its



View on the Lago Maggiore, from the Inn Bayano.



View on the Lago Maggiore, from the Inn Baveno.

coronets of dazzling snow, tower over lake, hills, and mountains, and dash sublimity into a picture which otherwise would only be remarkable for its smiling, placid loveliness. From the particular point we speak of the whole panorama is almost matchless. The small fairy-like islands, brought under the lee of your boat, the white sails glancing across the bay, and the romantic little town and pleasant inn of Baveno, are there all beautiful accessories to the picture, and are seen nowhere else to such advantage.

The capital attraction to most travellers in the Isola Bella, or Beautiful island, one of the Borromean group near to Baveno. We think this particular island, which is thoroughly artificial, rather curious than picturesque or beautiful; but it tells well at a distance with its lofty palace, its terraces, and formal groves and gardens, and contrasts in a striking manner with the simplicity or wild nature of the other islands, while it calls for that tribute always due to the art and industry of man when they have overcome great natural difficulties. *Le Isole Borromeo*, as they are called, after the name of the noble Lombard family to which they have belonged for several centuries, are four in number—the Isola di San Giovanni, or, as it is frequently called, the Isolino (small island), the Isola Madre (mother island), which stands in the midst of the group, the Isola Bella, and the Isola Superiore, which is oftener called L'Isola de' Pescatori, or Fishermen's island. This last island, with its humble homesteads and church spire, always struck us as being the prettiest of the group, and it is the one represented in our engraving, which is taken from an original drawing, wherein the artist set down without change or composition a scene he saw from the pleasant inn at Baveno.

In the midst of this island stands the palace of the Borromeo family. Though certainly no model of architecture, it has an air of elegance and even grandeur. It perhaps even improves in the interior, where, mixed up with much magnificence, there are several truly delightful apartments that offer that union of comfort and elegance which is always so dear to a traveller.

BEFORE AND AFTER DINNER.



HE various propensities and dispositions of different individuals, have often been dissected and described by metaphysicians and moralists; but, so far as we know,

few have undertaken to descant on the fact, that every individual presents many, and sometimes opposite characteristics at different periods of the same day. Some men, though amiable enough in the main, are remarked to be peculiarly tetchy on rising in the morning; others, when they feel sleepy at night; but there is no period when one is so likely to make one's self disagreeable as just before dinner. "No person," says a learned writer on digestion, "will deny that hunger is a painful sensation, whatever may be his opinion of appetite." When, therefore, a man feels hungry (which he generally does a little while before dinner), he is in pain; and when a man is in pain, he can not be expected to feel comfortable within, or to make himself agreeable to others. On the contrary, the moment his sensations glide from appetite to hunger, the outworks of philosophy give way; the enemy saps the very foundations of his character. When, therefore, you want to see a sanguine man despond, a cheerful one sad, a forbearing man impatient, or a benevolent one uncharitable, watch him while being kept waiting for his dinner. The best of tempers will not, at such a moment, require much provocation to get ruffled. My friend Rollan offers an apt example of these frailties. For about twenty-three hours and three quarters out of every twenty-four, a better friend, a kinder husband, or more indulgent father, does not exist; but make your introduction to him during the fifteen minutes before dinner, and you will conclude him to be the reverse. His wife's smiles are unheeded, his children's prattle forbidden, his friend's remarks unanswered. And wo unto the household should the cook prove unpunctual!

This is the dark side of the case. Most people are well-disposed after dinner. In proportion as pain is great, so are the

pleasures of alleviation; and, when the cravings of appetite are satisfied, not only do the good qualities of mankind regain their ascendancy, but their bad ones hide their diminished heads. The Chinese believe that the intellect and affections reside in the stomach; and really when one considers the entire moral revolution which occurs immediately after dinner, the notion loses half its absurdity. The change which takes place is so complete, that to describe people who *have* dined, it is only necessary to invert every characteristic of those who have not: then the despondent are filled with hopes; the irritable appear patient; the melancholy are gay; the miser becomes philanthropic, and the misanthrope good company. Misfortune is never so stoically received as when it makes its appearance after dinner. One day news came to Rollan that he had lost several thousand pounds; luckily, it arrived while he was enjoying his dessert, and he heard it without a sigh. It is, however, terrible to contemplate the effect the black intelligence would have had upon him if communicated during his antepandial susceptibility; for on that very day he had previously shown the most intense mortification because dinner was not announced till very nearly four minutes and a half after the fixed time!

Besides the inward characteristics which separate men who have and men who have not dined into two distinct classes, there are outward and visible signs by which they are readily separated and recognised.

The man who has not dined may be known as he walks homeward by the impatience expressed in his gait and aspect, and the fidgetiness he manifests if you should stop him to have a little conversation. Wo to you if such a conversation refers to any affairs of your own, in which you wish to interest him for the sake of his assistance or advice. He can not even be civil on such topics. Should your observations refer only to the chit-chat of the day, the case is little better. He takes decidedly different views as to the merits of Roland's grand assault last Saturday, and can not at all agree in opinion with you that the wind is promising to change from the east. With regard to the state of the country, he is clear and un-

hesitating: all is going wrong, and starvation is staring the country in the face. This, however, does not make him a whit more tolerant of the beggar who now comes up as if to illustrate his argument. He silences the whine of the petitioner in an instant by a threat of the police.

Arriving at his door, he announces himself with a sharpness of ring which startles the powers of the kitchen into a fearful animation. Mary, as she opens the door, answers the question, "Is dinner ready?" with an affirmative at all hazards, and then plunges down stairs to implore Mrs. Cook to make her fib a truth. Stalking abstractedly into his dressing-room, he fails to find, first the boot-jack, then the soap, and it is well he does not summon half the household to show both, to his confusion, in their usual places. The slightest tumult among the children three floors up now annoys him. His wife, to fill up the time till dinner appears, asks his opinion of some new purchase, which was made because she knew he would like it; but, to her extreme mortification, he wonders how she could choose such an "ugly thing." As the minute-hand of the time-piece approaches the figure twelve, he commences an anticipatory lecture on the advantages of punctuality, which increases in earnestness at every second after the clock has struck, and is gradually rising to the severity of reprimand, when—happy moment—enter the soup! Now commences an entire change in his external aspect, and in about twenty minutes he becomes

The man who has dined. Behold him now, seated in his lounging chair. His countenance is overspread with a smile of satisfaction. The harsh and grating tones of his voice are mellowed to softness; and instead of addressing his wife in half-snappish laconics he converses in the most soothing terms of affection and endearment. On being enticed to take a second glance at the new dress, he thinks it is not so ugly after all: indeed, of one thing he is quite certain—though he does not pretend to be a judge—but the colors will become her complexion admirably. This is the moment generally seized upon by ladies of tact to put in practice that pretty process of getting their own way called

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"coaxing." At such moments new bonnets are promised, and checks written for milliners' bills. Evening parties are arranged, "regardless of expense," and lessons from first-rate music-masters contemplated for elder daughters. This, bringing the rest of the junior branches in mind, leads to the ringing of the nursery bell, and though the children may happen to get up a race along the stairs to see who can get into the parlor first, and thereby create a most deafening clatter, the well-dined father blesses their merry little hearts, and is delighted that they are in such excellent spirits. Should a friend drop in, instead of being wished almost anywhere else, he is pressed to remain; and a quarter of an hour's conversation shows that the host's opinions concerning the weather and the state of the country have undergone a change. It is after dinner that our country is pronounced the greatest, best, and happiest nation in the world. The distress of the country fades gradually from the view: it dwindles down to a few interesting cases of operative manufacturers thrown temporarily out of employ, or of distressed agriculturists in picturesque cottages being kindly relieved by sentimental ladies or philanthropic country gentlemen. Then is the time that subscriptions to public charities are paid up, and coal and blanket societies planned for the ensuing winter. Nor does this sort of hopeful patriotism solely occupy the imagination of the man who has dined. His own affairs present themselves to him in brighter colors than at any other time. He builds castles in the air, congratulates himself on the improved aspect of his affairs, and very likely asks his wife, in the event of their ever keeping a carriage, what color she would like the horses to be? He appeals to his friend as to the best mode of investing spare capital; and asks him if it be true that a certain estate in the neighborhood is in the market, dropping at the same time a hint that, if it should come to the hammer, he shall attend the sale. In short, after dinner everything seems colored with a pleasing pink, which, speaking more strictly, is merely the moral medium through which we see the objects of our thoughts.

These, then, are the almost opposite ef-

fects often betrayed by the same man before and after dinner. Let us, however, return to the subject in a larger—more general—point of view. Man's thoughts and sentiments being awayed in a great degree by his sensations, the former will generally be hopeful or despondent as his sensations are pleasing or painful; and who will deny that these are more pleasing when his appetite is satiated than when it is craving? There are exceptions to this rule no doubt; for we have heard of gourmands who hunger and thirst after an appetite in order to enjoy the pleasure of satisfying it, and whose despondency only commences when they find they can not eat any more. But these are happily few, because unnatural exceptions. Nature tells us when to eat by exhausting our forces, and by making it a pain to disobey, and a pleasure to obey her dictates. Snappishness before, suavity after dinner, certainly form the general rule. This becomes a very important maxim in suitors and favor seekers. How many an individual has marred his fortune by asking the favor that would have made it, before, instead of after his patron's dinner! So fully convinced is an extravagant young Howard friend of ours of the necessity of timing his applications to the "the governor" for more cash, that he invariably sends his letters by the *day* mail, that they may catch the old gentleman napping just after dinner. The managers of charitable societies invariably make their collections after the hearts of the subscribers have been opened by a first-rate tavern feast. "The trade," *par excellence*, disarms the business-like caution of the booksellers at their annual auctions by a like expedient, and never think of putting up a single lot till after the removal of the cloth. In short, a thousand similar instances might be adduced to show that the tide of fortune and liberality flows highest after dinner. How different is it during the hour before! Then it is that quarrels are begun, and law pleas commenced; then it is that cross fathers cut off erring sons with a shilling, and wives and husbands talk of deeds of separation; at this inauspicious period editors become super-particular, and reject the lucubrations of doubtful contributors; and critics get so

uncommonly vigilant, that scarcely anything in a book will please them. Reader, when you have a favor to ask, a bargain to make, a contribution to send to a magazine, or a book to forward to a critic, be careful, if you can possibly help it, not to address yourself to an empty stomach.

COLOGNE.



COLOGNE, called by the Germans Cöln, is situated in a district of the same name, which is one of the two divisions of the Prussian province of Jülich-Cleve-Berg, so called from its containing the three old duchies of Jülich or Juliers, Cleve, and Berg. Cologne is the capital of the whole province, and stands on the left or west bank of the Rhine, forming a kind of semicircle. The city is fortified, and with its numerous spires and large buildings makes a good show from the opposite side of the river. It is about one hundred and seven miles east by north from Brussels. Cologne was an old Roman station often mentioned in Tacitus, and took its name of Colonia Claudia Agrippinensis, or "the colony of Claudius and Agrippina." The Roman word "colonia," *colony*, has been corrupted by the French into Cologne, and by the Germans into Cöln.

Under the Germanic empire, Cologne was a free imperial city, and had both a seat and voice as well in the diets or assemblies of Westphalia as in those of the empire. At this time the elector of Cologne occasionally resided here, as well as the chapter of the archbishop of Cologne and a nuncio of the pope. Urban VII. established a university here in 1388, to which succeeding popes granted privileges. It is still the seat of a catholic archbishopric, but the university as such no longer exists.

Cologne can not on the whole be called a handsome city, its streets being crooked, narrow, and dirty; but it has a great number of public buildings, and among them thirty-three churches and chapels. The

population in 1830 was 65,145. The cathedral is a noble building, 400 feet long and 180 wide, which, owing to its magnitude, is a conspicuous object from a distance, overtopping every other edifice in the city. The body of the cathedral is supported by 100 pillars. Two high towers were designed for this building, one of which is raised to only about half the height intended, and the other is hardly begun. Were the cathedral completed, it is generally allowed it would be one of the finest gothic buildings in Europe. Behind the high altar is the chapel of the three holy kings, or three wise men, as they are sometimes called, made of marble; the shrine which contains the bodies* is remarkable for the curious and elaborate ornaments with which it is decorated. The names of the three wise men, according to some accounts, are Gaspar, Melchior, and Balthasar, whose bones, as the story goes, were first taken to Constantinople by the emperor Constantine's mother; thence they were transferred to Milan; and finally obtained a sumptuous mausoleum in Cologne. What the precise merits of Gaspar, Melchior, and Balthasar, were, we have not been able to make out satisfactorily. The parish church of St. Peter contains the crucifixion of the apostle, one of Rubens's finest pictures, which he gave as a present to the church in which he received the rite of baptism. This distinguished painter was a native of Cologne. The picture travelled to Paris during the time when the French were so busy in appropriating to themselves all the valuable works of this kind which they could lay their hands on: after the downfall of Bonaparte it returned home.

In the church of St. Ursula we see the tomb of this holy Virgin, and, as the legend would have us believe, the bones of her 11,000 virgin companions and martyrs: the church does in fact contain an immense number of bones, and in a certain chamber, some accounts say, there are, or were, several thousand skulls, arranged in good order and adorned with garlands and coronets. The fact of the bones being there seems undoubted, the proof of their belonging to the holy virgins does not seem quite so clear.

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Church of St. Martin, Cologne.

Besides these there are many other handsome churches in Cologne, one of which, the church of St. Martin, is represented in our engraving. This view is given, not so much for the beauty of the church, as to exhibit the general style of architecture in this old city.

The townhouse has a fine portal formed by a double row of marble pillars. The old Jesuits' college, an extensive building, now contains a gymnasium or high school, with a library, a seminary for priests, and a valuable collection of old German paintings.

The situation of Cologne makes it a place of considerable trade, particularly with the German town of Frankfort-on-the-Main and Holland. In 1822, 4,415 vessels of various sizes arrived at the town, and 2,832 left it. The manufactures of Cologne are considerable; twenty-five tobacco manufactories, cotton, silk, and woollen wares, earthenware, soap, candles, &c.; and Cologne water, or *Eau de Cologne*, as it is commonly called, which is said to be made at twenty-four different establishments. The virtues of this water must be well known to all our readers; but if they have still any doubts on the subject, it is only necessary to read the printed French advertisement, which generally accompanies the bottle, and it is impossible to dispute the virtues of the commodity which the manufacturers extol so highly. A great deal of brandy is made at Cologne. The book manufactory of the town employs eighteen establishments and forty-two presses.

The public library of 60,000 volumes, the botanic garden, the school for the deaf and dumb, the various collections and cabinets, the hospitals, &c., are such appendages as we usually find in an old continental town. There is a bridge of boats over the river, which at Cologne is about 1,250 paces wide, connecting the city with the opposite town of Deutz.

LITERATURE.—The study of literature nourishes youth, entertains old age—adorns prosperity, solaces adversity—is delightful at home, unobtrusive abroad—deserts us not by day nor by night, in journeying nor in retirement.

GEOLOGY.

ORGANIC REMAINS.—TRANSITION ROCKS.
—COAL FORMATIONS.



N the primary rocks few indications of organized beings occur, all traces of these having been in general destroyed by the changes these beds have undergone. When we consider that they were originally the bottom of the ocean, that there they were covered by a vast mass of similar deposits, that then they were invaded by intense heat, reducing them almost to a fluid state, and that finally they have been elevated into the loftiest mountains on the globe; we may rather wonder that any remains of animals should be found in them, than that these should be so few and imperfect. With the transition beds a new state of things begins. Organic remains appear, sometimes in considerable abundance, and continue in an uninterrupted series down to the most recent formations. The first person who is recorded to have observed these organic remains in rocks is Xenophanes of Colophon, an old Greek philosopher, who, finding impressions of fishes in the limestone quarries near Syracuse, drew the natural conclusion that these rocks were productions of the sea, which must once have covered the place where they were found. Herodotus, the father of profane history, made the same remark in reference to Egypt, where shells often occur far from the present limits of the Mediterranean. For many ages, no further progress was made in a knowledge of these bodies, or their true scientific value, and even in the end of last century, Voltaire, in order to discredit the support they were supposed to give to the history of the Mosaic deluge, ventured to affirm that those found in the Alps had been brought thither by accident. The learned observations of Cuvier on the fossils found in the quarries near Paris, and the discovery of William Smith, that particular strata were characterized by certain fossils, and could be known from these in distant places, first showed the importance

the primary rocks few indications of organized beings occur, all traces of these having been in general destroyed by the changes these beds have undergone. When we consider that they were originally the bottom of the sea, they were covered by similar deposits, that melted by intense heat, and passed to a fluid state, and have been elevated into mountains on the globe; we find that any remains of life in them, than that of a few and imperfect beings, is a new state of organization. Organic remains appear in great abundance, and interrupted series down to the present formations. The first evidence to have observed in rocks is Xenocrinus, an old Greek philosopher's impressions of fishes near Syracuse, and the conclusion that these were remains of the sea, which reached the place where Herodotus, the father of history, made the same remark in Egypt, where shells are found to the present limits of the sea. For many ages, no progress was made in a knowledge of their true scientific value. At the end of last century, the discredit the support of the geologists gave to the history of the earth, ventured to affirm that the Alps had been identical. The learned geologists on the fossils found in Paris, and the disavowal of Smith, that particular fossils were identified by certain fossils known from these in the importance

of this study, and the new light it was fitted to cast on geology.

Organic remains occur in various states. Some are wholly converted into stone, being those properly named petrifications; others are little changed from their condition when forming part of a living body. Shells and bones are the best preserved and the least altered. Plants are often completely carbonized, when they appear like a dark-colored engraving on the stone in which they are enclosed. Many varieties of fossil wood are converted into flint, others into carbonate of lime, others into iron ore, and in some the process is only half completed, part being changed, part retaining its original character. Even where the whole has become solid stone, it is singular to find the texture of the wood preserved, the most minute vessels and fibres of the plant being visible in thin slices when magnified. In this manner, the class of plants to which these fossil trees belonged has been determined, though none of the most marked parts, the fruit, or flower, or leaves, remained. The variety, both of plants and animals, which have thus been preserved is very remarkable, and proves that all the great classes of both kingdoms had their representatives even in these early periods. It is also important to observe, that some genera have continued to exist during the whole series of geological revolutions, thus proving the unity of the system of the globe throughout the whole of these changes.

The transition rocks are the earliest fossiliferous beds known, and on this account are by some authors named protozoic, a word indicating that in them living beings first appear. The lower part of the formation consists of a great mass of argillaceous rocks, the finer varieties being clayslates, while the coarser are named greywacke. In Europe, Asia, and America, rocks of this formation, with characteristic fossils, have been found. These fossils are most abundant in the lime-stones, and are principally shells and corals. Some of the earliest beds, however, are impressed with the form of worms, which have left their slimy track, as it were, engraven on the solid rock, and thus, notwithstanding their soft and fragile texture, produced an imperishable

record of their existence. Another remarkable class of fossils in these ancient beds is the trilobites, so named from their body being often, as it were, divided into three lobes. There is no living representative known of this class of animals, which seem then to have been very numerous in many genera and species. They are, however, thought to have belonged to the crustacea, or those animals covered with a shelly crust like our present crabs and shrimps. It is also curious, that in some species the eyes, those most delicate of all organs, have been preserved, converted into calcareous spar, and exhibit a structure closely corresponding to those of some living animals. The remains of plants are far from numerous in this formation, but this is no proof that they did not then exist, as these beds seem to have been deposited in the deep ocean at a great distance from the shore.

A very common igneous rock in this formation is felspar porphyry. It is frequently of a red color, and consists of a compact mass of felspar in which small distinct crystals of the same mineral appear imbedded. This rock sometimes forms whole hills, but more frequently beds or veins intersecting the strata. It seems to represent the granite of former rocks, and in some cases can not be distinguished from it. This porphyry has been much valued for ornamental purposes, some of the finest antique vases being cut out of it, and it is still manufactured into similar articles, especially at Elfdal in Sweden. The mines wrought in many transition districts are, not improbably, connected with the same igneous agent. The lead ore here contains a small proportion of silver, though not enough to pay for its extraction, and small fragments of gold are often found in the neighboring rivulets. In the Hartz mountains, many mines of silver are wrought in this formation, and iron-ore is found in immense beds. Even in the Altai mountains, in Asia, it retains this character, the richest silver mines being found in a red porphyry in clayslate.

In Scotland, this group of rocks is separated by a very distinct line from those that follow. They not only differ in mineral character and appearance, but

must also have been divided by a considerable interval of time. All beds deposited from water must originally have been nearly horizontal. But this is no longer the position of these transition strata. They have been turned up on edge and apparently crushed together, bent or folded over in the most singular manner. And this has happened previous to the formation of the next or secondary rocks, which rest on them almost in a horizontal or slightly inclined position. The importance of this fact was first observed by Dr. Hutton, who saw in it a proof that no period in the world's history had been exempt from change, and that the rocks forming the earth's crust did not compose one continuous series, but had been liable to interruptions. The secondary rocks have been divided into various systems, principally from the fossils found in the different beds. Each group of plants and animals is supposed to have continued during a certain period, when some change in the condition of the earth's surface caused many of the species or genera to perish, whose place being filled up by the creation of others, a new world of animated beings was the result. Each group of organic beings, therefore, characterizes the beds which were formed during the period when it existed, and is only found in these. Though many exceptions to this occur in fossils continuing to exist through several systems of beds, still it is found to be generally applicable, and the secondary deposits, both of the eastern and the western continent, are classed on this principle. For the sake of clearness, we subjoin the table of English formations, as given by Mr. Murchison, only reversing the order, the lowest beds being placed first on the list, in conforming to the arrangement we shall follow in describing them:—

- Devonian or old red sandstone.
- Carboniferous or coal formation.
- Permian or magnesian limestone.
- New red sandstone or trias.
- Oolitic or jurassic system.
- Wealden (fresh water).
- Cretaceous or chalk formation.

The first of the above formations is the old red sandstone, which has been named the Devonian system, from being found in

great abundance in the county of Devon. Its most characteristic beds are vast masses of red sandstone, with others of coarse conglomerate, composed of rounded blocks, often of the primary rocks. These are of all sizes, from several feet or even yards in diameter down to the fine sand in which the whole are enclosed, and show, by their form, that they must have been long rolled about in the waters of the ocean. Some beds of the sandstone are gray colored, while others are of a marly or clayey nature. Beds of coarse limestone or concretion are also mixed with it. These rocks are evidently formed from the destruction of other previously existing rocks, and from their extent, and the size of the fragments, imply a period of great and very violent convulsion. It was, therefore, hardly to be expected that any remains of plants or animals should have been preserved in them, and till very lately this was supposed to be the case. Now, however, fishes are found to have lived then, in great numbers, and the remains of more than fifty species have been observed in rocks of this age in Scotland. These fishes are all different from those that now inhabit the ocean, and have possessed very singular forms. One of them, found in the red sandstone of Forfarshire, has its head covered with a kind of buckler, and has been hence named the cephalaspis. Another, of which the most perfect specimen was obtained from a quarry near the Tay, is covered with beautiful polished and channelled scales, and has been named the holoptychius. A third genus, with many species, is the pterichthys, which appears as if furnished with wings. So unlike are these creatures to any now existing, that it was at first doubtful to what class of animals they should be referred. The question has been principally decided by the researches of Agassiz, a Swiss naturalist, which have added many hundred species to the fossil fishes formerly known. In the United States, fossil fishes have been found in the sandstone formation of Connecticut; and the secondary and tertiary strata which border the seacoast from New Jersey southward, often furnish the teeth and scattered vertebrae of sharks, with other marine remains. Fossil fishes have

recently been found in the Virginia coal-basin near Richmond, in rocks of the sandstone formation, two hundred feet below the surface.

The lowest beds of the carboniferous system are those named the mountain limestone. The most distinguished rock of this class is a dark gray or blackish limestone, which contains many fossils, especially encrinurites, a variety of radiated animals. The parts of these which remain are principally a long jointed stalk with a hollow centre, often described as the backbone of a fish, which it much resembles. This stalk bore a crown, consisting of many pieces, and dividing into several branches, somewhat resembling a flower or open lily. In other beds, the remains of fishes and of numerous plants appear. In some parts of England, this formation, which is mixed with beds of slate-clay and sandstone, contains rich mines of lead, and along with this metal, in Derbyshire, also ores of copper, zinc, iron, and manganese. In the north of England it contains many beds of coal. Like other limestone rocks, caverns are frequently formed in it of great extent, Peak's Hole, in Derbyshire, being upward of two thousand feet long, and in one place a hundred and twenty high.

Above this is the true coal formation, in some respects the most interesting and important of all. It consists of innumerable beds, mostly of sandstone mixed with slate-clay or shale. The sandstone is generally white or gray, but sometimes light red; the shale is black or brown, and often very bituminous, when it burns like coal. The most important beds are, however, those of coal, though they seldom form a tenth part in thickness of the whole deposit. That this substance is of vegetable origin seems now placed beyond dispute, both the remains of plants found in it and by the woody fibrous texture seen by the microscope in many parts of it when cut into thin slices. Several theories have been formed regarding the manner in which the vegetable matter has been converted into coal. Some think that vast masses of trees and other plants have been carried down into gulfs or bays by rivers, as is now happening in the Mississippi and other large American

streams, where, having sunk to the bottom and been covered by sand and mud, they underwent a kind of fermentation, which was so modified by the immense pressure as to convert the woody matter into coal. Others regard this mineral as principally produced from marine plants, similar to those which occur in immense banks in some parts of the ocean. Others again think that it has been formed from forests growing nearly on the level of the sea, which have first been changed into marshes or mosses, and then submerged below the water, and covered with beds of clay and sand. It is not improbable that coal may have been formed in all of these ways, either separately or combined. A strong argument in favor of the last view is furnished by the trunks of trees, which have evidently grown upon the dry land, found in this formation. At Granton quarry, near Edinburgh, a tree of this kind is now exposed, nearly sixty feet long, and in some parts five feet in diameter. Similar trees are seen in Craigleith quarry, of smaller dimensions, the wood of which shows a great resemblance to that of the auracaria or New Holland pine. These trees might have been floated to the spot where they are now discovered, but others have been seen standing erect, and apparently with their roots extending into the rock. Three trees, in this position, were seen in the banks of the Esk, near Penicuik, and several others have been observed in the vicinity of Glasgow. These facts seem to show that these trees remain in the places where they grow, though it is difficult to conceive of a large tract of ground, of many hundred square miles, alternately sunk below and raised above the level of the ocean.

Many other varieties of fossil plants occur in this formation. The most beautiful are some species allied to recent ferns, from which a few can hardly be distinguished. About a half of all the plants found in the coal strata belong to this class, and many of them, with thick stems from fifteen to twenty feet or more long, probably to species of tree-ferns, like those now growing in tropical regions. Another class are the calamites, which seem to have resembled the mare's tail or equisetæ of the present day, though far

surpassing them in size. They have a jointed and furrowed stem, some inches in diameter, and occasionally several yards long, which is often covered as it were with a bark of coal, while the inside is changed into sandstone. The *lepidodendra*, whose surface appears as if covered by scales, are another class of giant representatives of diminutive plants of the present day, the small club moss of our heaths. Almost all the large stems in the coal formation were at one time described as belonging to palms, but plants truly of this nature are now found to be very rare. Still the character and size of the plants now mentioned prove that the state of vegetation then has been very different from what it now is in Europe, though not unlike that described by some recent travellers in the temperate parts of South America. It is therefore probable that the climate of our own and the surrounding countries was at that time considerably warmer than we now experience it, though the proof of this is less satisfactory than many have imagined. Animal remains are not numerous, and are principally shells or fishes of extinct species. It is remarkable that many of the shells, which are usually compacted into thick beds, belong to the genus *unio*, which lives in fresh water, while others are no less distinctly natives of the sea.

The coal formation is very widely extended in the northern parts of Europe and the United States. In the former it is most abundant in Britain and in Belgium, becoming rarer in France and all the southern countries. In Britain it is estimated as covering a twentieth of the surface, whereas in France the proportion is only a two-hundredth part. In the United States, it is found in vast abundance, covering the whole valley of the Ohio and the country west of the Mississippi, in immense basins, surpassing the whole island of Great Britain in extent. In these deposits several of the fossils are the same with those found in Europe. In South America, it appears even on mountains eight or ten thousand feet above the sea. It has also been discovered in Hindostan, China, and New Holland, though the identity in age of formations, so widely separated, seems problematical.

Coal consists of carbon, with various proportions of hydrogen, nitrogen, and oxygen, mixed with earthy matter. There are several varieties of it, distinguished both in composition and in appearance. Common coal breaks into cubical or slaty fragments, and has a resinous lustre. Pitch coal is more compact and shining, while the channel or parrot coal, from which gas is usually made, is of a duller aspect and grayish-black color. Anthracite or blind coal burns without flame, and seems to be some of the former varieties deprived of their bitumen by heat. It is occasionally found in this country near igneous rocks, and in great abundance in Pennsylvania. The coal is dug by mines, sometimes of great depth and extent, especially in the district round Newcastle. In these the workmen are exposed to much danger from the roof of the pits falling upon them, and especially from choke-damp and foul air, as they are named by the miners. The former is the carbonic acid gas, which being heavier than common air, accumulates in the lower parts of the pit, and soon extinguishes the lights and destroys life in those involved in it. The foul air or light carburetted hydrogen is identical with marsh gas, and is exceedingly inflammable when mixed in certain proportions with oxygen. It then catches fire on the approach of a flame, and explodes almost like gunpowder, destroying all the walls and partitions in the pit, burning the unfortunate miners, and blowing everything in the shafts into the air. Sometimes above a hundred people have perished in a moment by one of these explosions. It was such a catastrophe which gave rise to the experiments of Sir Humphry Davy, which ended in the discovery of the safety-lamp, one of the many gifts of science to man, and the means of saving many valuable lives. These dangerous gases do not occur in all pits, but often burst out from cavities in the coal, altogether unexpectedly, and unless the miners are on their guard, cause their instant destruction.

It is a remarkable circumstance that beds of iron-ore are mixed up with the coal, and the two are often so close together that both can be wrought at once. In the Scottish coal-field, these bands of

iron-ore are very numerous, in one section, near Glasgow, more than sixty being known. This arrangement gives double value both to the coal and iron, and is undoubtedly an important element in the manufacturing prosperity of that country. Limestone, which is needed as a flux to melt the iron-ore, is also at hand, in the formation on which this immediately rests. This union of these important minerals is so essential to the interests of man, that anything more adapted to promote them can scarcely be conceived. Yet no merely natural reason can be assigned for it; there is no physical cause that can produce it; for aught we perceive, the iron ore might as well have been placed in the midst of the primary mountains, far from the coal by which it was to be reduced. Is it unreasonable, therefore, to believe that the wants of man were foreseen and provided for ages before he had any place on the earth? Is it not rather our duty to search out these indications of our Creator's care, and to adore him for his goodness to the sons of men?

THE POLAR BEAR.



IN those desolate fields of ice which lock up the polar seas during a great part of the year, the White Bear (the *Ursus Maritimus* of Linnæus) finds an abode congenial to his hardy nature. Prowling over the frozen

wastes, he satiates his hunger on the marine animals, such as seals, who break through the ice to breathe the open air; or he plunges into the sea in pursuit of his prey. Possessing an astonishingly acute scent, great activity and strength, and equal cunning, he contrives to support existence in regions where it might be thought that so large a quadruped must necessarily perish. Ever watchful, he ascends the hills of ice, called hummocks, to extend his range of observation over the wide plain where a solitary seal may perhaps be resting; or to snuff the tainted

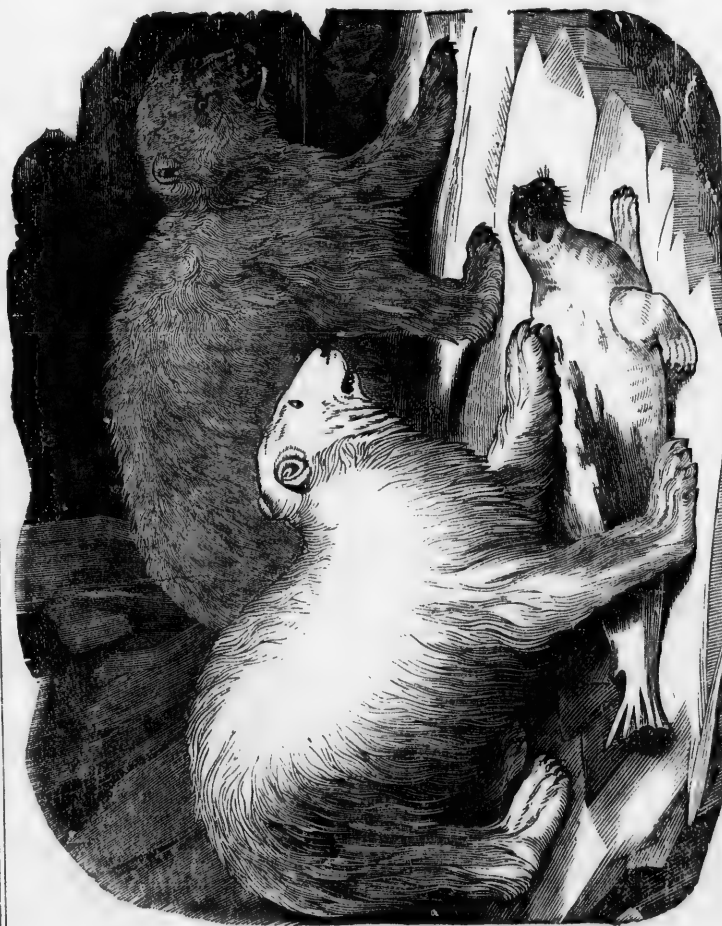
air, by which he knows that some remains of a whale, or a walrus (sea-horse), deserted by the fishermen of Europe, or the native Esquimaux, will afford him an ample feast. He doubtless often suffers long and extreme hunger; for the seal, which forms his chief subsistence, is as vigilant as the bear; and he is often carried out to sea upon some small island of ice, where he may remain for days without the possibility of procuring food. The polar bear has been seen floating in this way at a distance of two hundred miles from any land. Swimming excellently, he, however, often travels from one island of ice to another; or visits the shore, where he commits fearful ravages. In Iceland, where these destructive animals sometimes land, the inhabitants immediately collect together to destroy them. Near the east coast of Greenland, according to Captain Scoresby, in his account of the Arctic regions, they have been seen on the ice in such quantities, that they were compared to flocks of sheep on a common.

The animal is ordinarily from 4 to 5 feet high, and from 7 to 8 feet long, weighing from 600 lbs. to half a ton. Barentz, an early voyager in these regions, killed two enormous white bears in 1596, the skin of one of which measured 12 feet, and that of the other 13 feet. The polar bear generally retreats from man; but when attacked he is a formidable enemy.

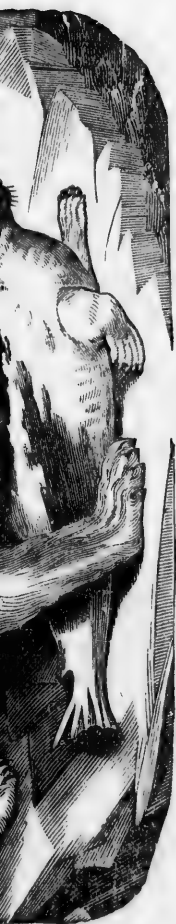
The sagacity of the polar bear is well known to the whale-fishers. They find the greatest difficulty in entrapping him, although he fearlessly approaches their vessels. The following instances of this sagacity are very curious:—

"A seal lying on the middle of a large piece of ice, with a hole just before it, was marked out by a bear for its prey, and secured by the artifice of diving under the ice, and making its way to the hole by which the seal was prepared to retreat. The seal, however, observed its approach, and plunged into the water; but the bear instantly sprung upon it, and appeared, in about a minute afterward, with the seal in its mouth.

"The captain of one of the whalers being anxious to procure a bear, without wounding the skin, made trial of the



Polar Bears and Seal.



Polar Bears and Seal.

stratagem of laying the noose of a rope in the snow, and placing a piece of kreng within it. A bear, ranging the neighboring ice, was soon enticed to the spot, by the smell of burning meat. He perceived the bait, approached, and seized it in his mouth: but his foot, at the same moment, by a jerk of the rope, being entangled in the noose, he pushed it off with the adjoining paw, and deliberately retired. After having eaten the piece he carried away with him, he returned. The noose, with another piece of kreng, being then replaced, he pushed the rope aside, and again walked triumphantly off with the kreng. A third time the noose was laid; but, excited to caution by the evident observation of the bear, the sailors buried the rope beneath the snow, and laid the bait in a deep hole dug in the centre. The bear once more approached, and the sailors were assured of their success. But Bruin, more sagacious than they expected, after snuffing about the place for a few moments, scraped the snow away with his paw, threw the rope aside, and again escaped unhurt with his prize."

The female polar bear is as fierce in her hostility as the male; but nothing can exceed the affection which she feels for her young. The difficulty of procuring food for them, and the hardships to which they are exposed, no doubt call forth this quality. Some of the instances upon record are as singular as they are affecting. The following is related in one of the polar voyages:—

"Early in the morning, the man at the mast-head gave notice that three bears were making their way very fast over the ice, and directing their course toward the ship. They had probably been invited by the blubber of a Seahorse, which the men had set on fire, and which was burning on the ice at the time of their approach. They proved to be a she-bear and her two cubs; but the cubs were nearly as large as the dam. They ran eagerly to the fire, and drew out from the flames part of the flesh of the Seahorse, which remained unconsumed, and ate it voraciously. The crew from the ship threw great pieces of the flesh, which they had still left, upon the ice, which the old bear carried away singly, laid every piece before her cubs,

and dividing them, gave each a share, reserving but a small portion to herself. As she was carrying away the last piece, they levelled their muskets at the cubs, and shot them both dead; and in her retreat, they wounded the dam, but not mortally.

"It would have drawn tears of pity from any but unfeeling minds, to have marked the affectionate concern manifested by this poor beast, in the last moments of her expiring young. Though she was sorely wounded, and could but just crawl to the place where they lay, she carried the lump of flesh she had fetched away, as she had done the others before, tore it in pieces, and laid it down before them; and when she saw they refused to eat, she laid her paws first upon one, and then upon the other, and endeavored to raise them up. All this while it was piteous to hear her moan. When she found she could not stir them, she went off, and when at some distance, looked back and moaned; and that not availing to entice them away, she returned, and smelling around them, began to lick their wounds. She went off a second time, as before, and having crawled a few paces, looked again behind her, and for some time stood moaning. But still her cubs not rising to follow her, she returned to them again, and with signs of inexpressible fondness, went round first one and then the other, pawing them, and moaning. Finding at last that they were cold and lifeless, she raised her head toward the ship, and growled her resentment at the murderers, which they returned with a volley of musket-balls. She fell between her cubs, and died licking their wounds."

VIRTUE.

GUARD well your heart. Shut up every crevice by wholesome thoughts, and the evil atmosphere by which thou art surrounded will never enter. He who would tempt thee for one moment to turn aside from the path of truth, must receive no favors from thy hands. Slumber not when evil associates are pressing to thy side. To be virtuous is to be respected; to be respected is to be happy; to be happy is to be good.

THE WIFE OF LAFAYETTE.



HE faithful and devoted wife of General Lafayette was a daughter of the illustrious house of Noailles. She was married at the early age of seventeen, and scarcely had the honey-moon glided happily away when her youthful husband left her side to fight for American Independence. During his absence, Madame Lafayette ruled her household and numerous estates with wisdom and prudence far beyond her years. At length the husband, whom she loved so dearly, and of whom she was so justly fond, returned covered with glory to lay his laurels at her feet. Some few happy days were spent together, and then the storm cloud of the French revolution broke over their heads. Her husband was soon driven to exile, but it was thought that Madame Lafayette, living quietly and in great retirement on her estate in Auvergne, ran no danger. But her love of liberty, her high rank, her talents, made her an object of suspicion. She was arrested on the 10th of August, and soon after sent to Paris. Her mother, grandmother, and sister-in-law, all perished on the same scaffold. Madame de Lafayette herself was in daily expectation of death. She made her will, and waited calmly and resolutely for the summons to the guillotine. The revolution of the 9th Thermidor preceded by five days that appointed for her execution. As soon as she was liberated she sent her only son, then in his childhood, to the care of General Washington, after whom he had been named; and then hastened with her two daughters to find her unfortunate husband—then languishing in an Austrian prison. She reached Vienna by means of an American passport, obtained an audience of the emperor, and solicited either the release of her husband, or permission to share his captivity.

"As to the release of General Lafayette," replied the emperor, "it is a very complicated piece of business; on that point, my hands are tied."

Madame Lafayette joyfully embraced

the other alternative—that of sharing her husband's gloomy prison. Sixteen months close imprisonment in France, the loss of her kindred, her continual anxiety respecting her husband, had combined to affect her health—which declined so rapidly in her damp prison at Olmutz, that serious apprehensions were entertained for her life. Feeling the importance of her life to her family, and at their earnest solicitation, she wrote to the emperor to request his permission to spend a week in Vienna for change of air, and for the purpose of consulting a physician. Her letter remained two months unanswered, and then came an imperial mandate, forbidding her ever to appear in Vienna, but offering her freedom—on condition that she would never seek to return to her husband's prison. Madame de Lafayette's noble and touching answer to this inhuman prostitution, fortunately for posterity, remains on record. It was as follows:—

"I owed it to my family and my friends, to make some efforts for the preservation of my life; but they know me too well to suppose, for an instant, that I would accept it at such a price. I can not forget that when we were on the point of perishing, my husband, by his physical and mental sufferings in Austria, and I, by the tyranny of Robespierre, in France, was not allowed to receive any communication from him, nor to inform him in return that his wife and children were still in existence; and I will never, of my own free will, expose myself to the agony of separation from him again. However unsuitable this residence may be to my daughter, and however unfavorable to my health, we will gladly avail ourselves of his imperial majesty's goodness in allowing us to remain here, and will never trouble him with any more petitions."

From that time Madame de Lafayette made no further efforts, but bore her sufferings firmly and patiently, until the victories of the French republic, and especially those of General Bonaparte, changed the aspect of the affairs. General Lafayette was restored to freedom, and with his devoted wife, returned to his native country, and fixed his residence at La Grange—the maternal inheritance of his wife—an estate situated about twelve

leagues from Paris. Here Madame de Lafayette spent the remainder of her short life in the bosom of her family. But the poisoned arrow of grief and anxiety had drank her life blood, and after many lingering months of suffering, this affectionate mother and heroic wife closed her pure and exemplary life on the 24th of December, 1806. Posterity has covered the name of General Lafayette with glory, but surely the patient endurance, the self-sacrificing devotion of his noble wife, deserve an equal meed of praise.

INTOLERANCE.



GREAT deal is said and written, and declaimed at the present day, about the intolerance of which the last age has been proved guilty in two or three no-

table instances. Tirades have been written by the score, against the suspension of witches, and the persecution of the baptists and quakers, and our fathers have been branded as the most intolerant self-conceited bigots that ever set up their own doctrines and opinions, to the exclusion of every other. With all these conspicuous and barbarous examples before us, and barbarous we admit them to be—we still hesitate not to affirm that there is quite as much intolerance in the world, and among ourselves even, at the present moment, as ever existed in any former period of the world's history. This may seem a bold assertion to those who look only at the mask and superficialities of society; but he who has sounded the depths and shoals of human nature, will find, if we mistake not, this error the deepest fixed, and the last to be eradicated, of all which lurk and thrive in that sea of depravity—proud, selfish, wealth-seeking, error-loving man. True, the ordeal and the stake no longer exist as its prime ministers; these belonged to an age and custom that has passed away; yet the principle remains

as strongly predominant as when those symbols figured and blazed on every common. Mankind, ever the slave of custom, obeys implicitly the changing forms of society, and models his practice according to the age in which he lives.

To illustrate more particularly the force of these remarks—how many are there, who denounce unheard, every new science, or doctrine, or theory, for the sole reason that they conflict with their accustomed views and prejudices. How many who are not even capable of understanding the claims of a system, much less of weighing them by the principles of sound reason, scout at once the profoundest theories as visionary and absurd, and libel their advocates with the foulest epithets of derision and reproach. One would suppose that such persons were possessed of extraordinary insight and powers of reasoning; that they could penetrate, and were familiar with the remotest laws of nature and mind; yet come to inquire into the causes of their far-sighted wisdom, and plenty of gall, and tirade, and declamation, you shall see showered on all sides, but not one word of reason. What one man out of five hundred who takes a side in politics, and rants and declaims so vehemently, understands thoroughly one fundamental principle of government or political economy?

Is this the age of toleration? Show us one liberal, honest-minded man, who is not the slave of opinion or prejudice, and who weighs every subject by the impartial dictates of enlightened reason, and you have found a jewel which the world, alas, too seldom contains.

Intolerance is only unjust, but foolish and impolitic. It more than any other, is a zeal which defeats its own ends. Every speculative system, like the shield of olden fable, has its golden, as well as its dark side. No error even, that boasts of many advocates, but has some "show" of truth; and the surest, indeed the only way of convincing an opponent, is by meeting him on his own grounds, by showing him that you have seen the disputed subject, in the same point of view as himself, and are capable of appreciating the good as well as the evil of his system. Above all, convince by "reason." For no other pur-

pose was this best and holiest faculty bestowed upon man, but to sift error and discover the true and the right; and he who neglects or refuses to employ this high attribute, has already sold his birth-right, and is no longer worthy of the name of man.

MOHAMMEDAN DEVOTIONS.



OUNTAINS, the best of which are such as that represented in our engraving, are common in Mohammedan towns; and, besides the ordinary use of assuaging the thirst of the passers-by, they, with an adjoining platform, and with an erect stone to indicate the way the worshipper should turn his face, constitute so many oratories for the use of those whom the call to prayer surprises at a distance from the mosque, or who prefer to perform their devotions in the open air. It is obligatory on all Mohammedans to pray five times a day; but it is only on the Friday that they are expected to attend at the mosque for the purpose: and in general, when a Moslem hears the call to prayers, or knows that the hour is arrived, he will perform his devotions at any convenient place near that where he happens to be at the time, after he has executed the required ablutions. These consist in washing the hands three times successively, as well as the face, the arms, the head, the neck, and the feet; and also the inside of the mouth, of the ears, and of the nostrils. It is for the purpose of these ablutions that fountains are so abundantly provided. In places where no water is to be had the ablution may be made with the earth or sand. This practice is followed by persons travelling in the deserts; and with regard to persons at sea, who have no such substitutes, and can not afford fresh water, they affect their ablutions by rubbing themselves with their hands alone, after having placed them on a stone. Sea-water is considered im-

pure, and entirely unfit for the purposes of ablution. These washings are generally performed in a very slight way. In consequence of its being necessary to wash the arm up to the elbow, the Moslems have the sleeves of their dress with buttons from the elbow to the wrist. The Turks and Arabs generally wear their sleeves loose and unbuttoned, to save the trouble of frequent unbuttoning and buttoning again; but the Persians, who are much less observant of what their religion in this respect requires, are seldom seen but with their sleeves buttoned up. Indeed, everything that their forms of worship demand, in regard to prayers and ablutions, is seldom performed by any Moslems except those of the higher and middle classes, and in all cases the morning, noon, and evening periods of prayer are the most attended to, while the intermediate ones are comparatively neglected.

Although Christians are not generally allowed to enter the mosques, the ceremonies of prayer are so much performed in the streets and open places of towns, that the most unobservant stranger soon becomes thoroughly acquainted with all the proceedings.

There are no bells in Mohammedan countries; but, at the appointed hours, an officer of the mosque, called the *muezzin*, mounts upon the minarets and calls the faithful to prayers, or rather notifies that the proper time has arrived. For this office the persons endowed with the most sonorous voices are chosen in preference, and the distance at which they can be heard is such as to become a subject of surprise to Europeans. This notice is not delivered from every mosque, but only from such as are sufficient to afford an equal distribution of the sound over the city. The call consists of a declaration of the Mohammedan profession of faith: "There is no other god but God, and Mohammed is the prophet of God!" with many repetitions; then follows the invitation to prayers, to which, in the morning, is added the assurance that "prayer is better than sleep;" and the whole concludes with the declaration that God is most great, and most high, and that there is no other God but him.

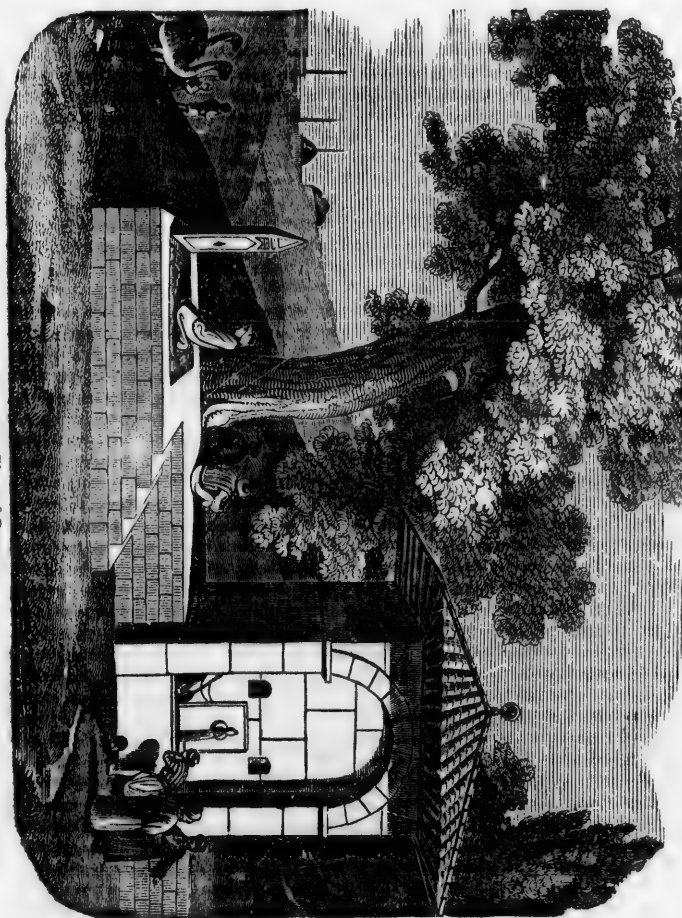
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An Oratory or Place of Prayer.



happen to be abroad hasten to the fountains and the streams to perform their ablutions; when this is done, if there are many present, one of the number assumes the office of an imaum, or leader, and, placing himself before them, with his face toward Mecca, the rest follow him in his words and postures.

THE LOVE OF NATURE.

"Strange, there should be found
Who, self-imprisoned in their proud saloons,
Renounce the odors of the open field
For the unscented fictions of the loom—
Who, satisfied with only pencilled scenes,
Prefer to the performance of a God
Th' inferior wonders of an artist's hand!
Lovely, indeed, the mimic works of art,
But nature's works far lovelier. . . .
The air salubrious of her lofty hills,
The cheering fragrance of her dewy vales,
And music of her woods—no works of man
May rival these; these all bespeak a power
Peculiar, and exclusively her own.
Beneath the open sky she spreads the feast:
'Tis free to all—'tis every day renewed;
Who scorns it, starves deservedly at home."

COWPER.



HE poet, we think, has set this matter in its true light. Art may do much, but nature has done vastly more. The artist, indeed, may bring beauties together which exist separately in nature, and, in this sense, may be said to excel nature; but the great and fundamental distinctions still remain between the works of man and those of God. There is surely something factitious and radically wrong in the taste which can admire the mimic and disregard the real landscape—just as there is in the sympathy which weeps over distress in romance, and turns with loathing from it in real life. The poor man who has formed a taste for nature need scarcely repine that he wants a palace or a picture-gallery. He has both, and of God's own making; and if he be a Christian, he is a coproprietor with God. The roof of royalty will not bear to be named with the vaulted sky; and the sights of a palace are poor compared with those seen in the

heavens. That taste must be morbid and grovelling indeed which can prefer the former to the latter, the less to the greater, the mean to the magnificent, and, at best, the imperfect and miniature copy to the great and glorious original.

It is to be regretted that so little is done to form the taste we speak of, and that cases of sincere and devout attachment to the beauties and wonders of the external world are so rarely to be met with, not only among the unlearned, but among the wealthier and educated classes. We do not speak of pretensions, for these are numerous, but it is easy to see that they are only pretensions, and made to serve a purpose. The real lovers of nature are relatively few.

We know there are constitutional differences, which will produce differences here as elsewhere; but these might, in general, be made to be differences more of degree than of kind. The parent and teacher might do much to mend the matter. We do not mean that they should make it a stated and formal part of instruction; for the moment that many children perceive this, they conceive an aversion to what they look upon as a task. Let them have opportunities of becoming acquainted with what is great and beautiful in creation, and, if possible, let their first impressions be pleasant. Encourage them to describe what they have seen, and explain what they do not understand. Let books fall in their way, to sharpen their relish and extend their knowledge of natural objects. The taste thus formed is likely to continue, and to furnish a constant source of enjoyment through life. How many, for want of this training, are miserable, when left alone with nature! Her mountains are nothing to them but heaps of unshapely earth; and they see nothing in streams but water in motion; and hear nothing in the winds but confused and unmeaning sounds; and the trees are only so high and of a certain color; and the clouds are only interceptors of the sun's rays; and the sky is blue, or red, or green, but nothing more. They are delighted to be relieved from their dull companion, and hail the approach of a shepherd's dog, or the sound of his master's voice in the distance, as a

sweeter sound than any that nature has to give.

We rather think that the love we speak of is never strong or lasting unless it be contracted in early life. The associations of childhood are the strongest of any, and usually go with us to the grave. Hence the all-prevailing love of the place of our nativity. Perhaps few men had a finer perception of what was amiable in manners and beautiful in art than Charles Lamb; and yet, exquisite as was his sensibility here, he does not appear to have been capable of enjoying himself in the society of lakes and mountains. Byron, on the contrary, could say, and no doubt truly:—

"There is a pleasure in the pathless woods,
There is a rapture on the lonely shore;
There is society, where none intrudes,
By the deep sea, and music in its roar."

But Byron, independently of the sterner structure of his mind, had the advantage of Lamb in his early training and habits. He had conversed with nature in her moments of repose; his fancy had mingled in the ennobling stir of the elements—had drunk deep from the fountains of the hills, and imbibed the spirit of the solitary glens; he had put a tongue into the mysterious winds as they passed, and had gathered the leaves of the forest, as the leaves of the great sybil of nature. He retained this love of nature to the last, and it seems often to have been his only solace and enjoyment.

The love of nature prepares the way for the love and appreciation of the fine arts. This is an additional advantage. The discipline which the mind has undergone in contemplating the various aspects and relations of nature, predispose it to enjoy and to judge of what is excellent in certain departments of the imitative arts. It brings along with it a train of thoughts, and feelings, and associations, which readily attach themselves to what is great or beautiful, not only in painting but in poetry, and in all the higher developments of the human mind.

Its effects are not only mental, but moral also. Other things being equal, we think the man who loves the works of God is more likely to think of and to love God himself than the man to whom these works

are matters of total indifference. The Christianity of Newton was not hurt but heightened by his frequent and earnest readings of the wonders of the visible universe. David looked up into the heavens, felt his own insignificance, and wondered all the more that God should mind man at all. Whatever teaches us our own littleness and rebukes the spirit of pride within us, brings us a step nearer God. We do not wish to lay undue stress upon this point, and we are aware that cases of an opposite kind might be urged; but what we do assert is, that, other things being morally equal, there is greater probability of the admirer of nature being brought to think of God, than there is of the person who sees neither beauty nor grandeur in the works of creation.

Besides all, it is a kind of slight which we cast upon nature—as Johnson or Addison somewhere expresses it—when we do not look at the spectacles which she is constantly varying and exhibiting to us. Has the scene been formed and the curtain drawn for nothing? or is the eye or ear unfitted to enjoy it? We think it scarcely less a pleasure than a duty to cultivate this taste in ourselves and our children. We hardly know the enjoyment we would not sooner part with than this. It is not merely that the senses are gratified, but the feelings are refined and the heart improved by it. The effect of a moonlight scene on the mind which is ill at ease, is well known. The imagination, too, is necessarily exercised and strengthened by the unceasing analogies which are constantly offering themselves between what is spiritual and what is material. But whoever may despise or forget these things, it is least of all the part of the Christian to do so. The volume of nature is as truly the work of God as that of providence or revelation. The great Teacher habitually illustrated the one by the other; he stereotyped his doctrines in the flowers, and trees, and hills.

It may be added, that the lover of nature has a better chance of enjoying a sound mind in a sound body. This is no mean consideration.

The most ardent admirer of nature need be in no fear of exhausting her stores, or draining out her vast resources. The

changes of weather, the rising and setting sun, the play of the clouds, the revolution of the seasons, the alternations of heat and cold, and night and day, and drought and moisture, and the unceasing diversity of light and shade to which these give rise, preclude the possibility of entailing a sense of sameness or insipidity on the oldest or most diligent observer. As if to guard against this result, the surface of the earth itself is thrown into the most varied forms.

Independently, however, of the actual differences and dissimilarity in scenery, and apart from the variety of individual form and of combination which are met in the same kinds of it, whether of the calmly beautiful or sternly sublime, there is a constant vicissitude and change passing over the prospect which we daily see, that goes far to prevent that feeling of monotony which we might otherwise experience. The warm rich hues of the south and the cold harsh tints of the north alternately rest upon it. It smiles and frowns, is gay or serious; and the gayety or pensiveness of to day is not the liveliness or sedateness of to morrow—capricious at one time as a Cleopatra, and steadfast as a Penelope at another; and yet that constancy or versatility is never exactly alike, but different in detail and in general effect. The unskilful eye may see no difference, but the initiated does. The experienced shepherd can discriminate between the faces of his sheep; the musician feels the slightest flaw in tone, or time, or in general balancing and expression; and the accomplished artist at once detects what is false in color or faulty in form.

We can not but think, in whatever light we consider the subject we have touched upon—that there are many and strong reasons for dismissing the neglect with which we generally treat it—whether we look to the place which we occupy in creation, or to the relations which we sustain to the Creator, or to the kindness he has shown in making “all nature beauty to the eye and music to the ear”—or whether we regard the pleasurable emotions, refinement of mind, and health of body, which we derive from a frequent and earnest intercourse with the beauty

and grandeur of the external universe. At any rate we feel well assured that the Christian is not justifiable in neglecting to cultivate an acquaintance with the “manifold works of God,” for “in wisdom he has made them all, and his tender mercies are over all his works;” and they serve at once to illustrate his attributes, his providence, and his grace.

AUGUST.



AUGUST, so called in compliment to the celebrated Roman emperor Augustus; and by the Anglo-Saxons, *Arn-Monat*, intimating that this was a month

for filling the barns with the products of the land. Arn is the Saxon word for harvest.

In the beginning of this month the weather is still hot, and usually calm and fair. What remained to be perfected by the powerful influence of the sun, is daily advancing to maturity. The farmer now sees the principal object of his culture, and the chief source of his riches, waiting only for the hand of the gatherer. Of the several kinds of grain, rye and oats are usually the first ripened; but this varies, according to the time of sowing, and some of every species may be seen fit for cutting at the same time.

Every fair day is now of great importance; since, when the grain is once ripe, it is liable to continual damage while standing, either from the shedding of the seeds, from the depredations of birds, or from storms. The utmost diligence is therefore used by the careful husbandman to get it in, and laborers are hired from all quarters to hasten and complete the work.

The pleasing harvest scene is beheld in its perfection only in the open-field countries, where the sight can take in at once an uninterrupted extent of land waving with grain, and a multitude of

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FIRMNESS OF CHARACTER.

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people engaged in the various parts of the labor. It is a prospect equally delightful to the eye and the heart, and which ought to inspire every sentiment of benevolence to our fellow-creatures, and gratitude to our Creator.

In a late season, or where favorable opportunities of getting in the harvest have been neglected, the grain on the ground often suffers greatly from heavy storms of wind and rain. It is beaten to the earth, the seeds are shed, or rotted by the moisture; or, if the weather continues warm, the grain grows, that is, the seeds begin to germinate and put out shoots. Grain in this state is sweet and moist; it soon spoils on keeping; and bread made from it is clammy and unwholesome.

The rural festival of harvest-home is an extremely natural one, and has been observed in almost all ages and countries. What can more gladden the heart than to see the long-expected products of the year, which have been the cause of so much care and anxiety, now safely housed, and beyond the reach of injury?

The poor laborer, too, who has toiled in securing another's wealth, justly expects to partake of the happiness. The jovial harvest supper cheers his heart, and prepares him to begin without murmuring the labors of another year.

FIRMNESS OF CHARACTER.



HERE is no trait in the human character so potential for weal or woe, as firmness of purpose. It is wonderful to see what miracles a resolute and unyielding spirit will achieve. Before its irresistible energy the most formidable obstacles become as cobweb barriers in its path. Difficulties, the terror of which causes the pampered sons of ease and luxury to shrink back with dismay, provoke from the man of lofty determination only a smile. The whole history of our race—all nature, in-

deed—teems with examples to show what wonders may be accomplished by resolute perseverance and patient toil.

It is related of Tamerlane, the celebrated warrior, the terror of whose arms spread through all the eastern nations, and whom victory attended at almost every step, that he once learned, from an insect, a lesson of perseverance, which had a striking effect on his future character and success. When closely pursued by his enemies—as a contemporary tells the anecdote—he took refuge in some old ruins, where, left to his solitary musings, he espied an ant tugging and striving to carry away a single grain of corn. His unavailing efforts were repeated sixty-nine times, and at each several time, so soon as he reached a certain point of projection, he fell back with his burden, unable to surmount it. But the seventieth time he bore away his spoil in triumph, and left the wondering hero reanimated and exulting in the hope of future victory.

How pregnant the lesson this incident conveys! How many thousand instances there are in which inglorious defeat ends the career of the timid and desponding, when the same tenacity of purpose, the same unflinching perseverance, would crown it with triumphant success.

Resolution is almost omnipotent. Sheridan was at first timid, and obliged to sit down in the midst of a speech. Convinced of, and mortified at, the cause of his failure, he said one day to a friend, "It is in me, and shall come out." From that moment he rose and shone, and triumphed in a consummate eloquence.—Here was true and moral courage. And it was well observed by a heathen moralist, that it is not because that things are difficult that we dare not undertake them. Be then bold in spirit. Indulge no doubts, for doubts are traitors. In the practical pursuit of our high aim, let us never lose sight of it in the slightest instance; for it is more by a disregard of small things, than by open and flagrant offences, that men come short of excellence. There is always a right and a wrong; and if you ever doubt, be sure you take not the wrong. Observe this rule, and every experience will be to you a means of advancement.

FRIENDSHIP.



OW dear a gem is friendship. It sweetens the bitter cup, and it smooths the thorny path of life. How pleasing the idea, how animating the thought, that we have friends. How much to be prized is a true friend in whom we may always confide.

But some may ask, who are my friends, and how may I know them? Let me ask, how did the man, that fell among thieves, know which was his friend? You would readily answer, the Samaritan, because he showed mercy.

A true friend, whose heart is drawn out in sympathy for those around, who is ready to speak a word of consolation to the afflicted, and whose hand is ready to administer relief without expecting recompense, is to be prized above the sparkling gems of earth.

But a false friend is more to be dreaded than an avowed enemy; for we know the design of an enemy is to injure, but a false friend is like a serpent coiled in the grass, lying in ambush for its prey, and its unhappy victim is ensnared before he is aware that danger is near. Some will be our friends while prosperity blooms along our pathway; then all goes on pleasantly and harmoniously; but when adversity, with its chilly blast, sweeps away the flowers of prosperity, and naught but the leafless stock, the recollection of the past, remains, then we look around for our friends. Alas! they are gone—yes, gone when we most needed them.

But, to obtain true friends, we have a part to act; we must show ourselves friendly to our acquaintances and friends, and those with whom we associate. Most of us are strangers, from different parts of the country, in a city of strangers; and the majority of us are of the unfortunate class. Bright was our childhood's future, for then prosperity and happiness encircled our families, but misfortune overtakes us, our worldly prospects are blighted; then

we feel that exertion is to be made on our part, and thither we resort to this.

Many of us have had our family circles broken by the impartial hand of death. We have seen a kind father, an indulgent mother, or both, consigned to the silent grave. Many of us have received the unwelcome tidings of the death of parents and friends. Unwelcome to us indeed. It is while perusing the pages of the fatal letter which bore the message, that our hearts are ready to burst with grief. Painful thought! that we had not the privilege of standing by their couch of pain, and administering to their varied wants, or of hearing their farewell advice, nor of seeing the last flicker of the lamp of life as it was gently extinguished by the hand of death. Then how alleviating to the afflicted soul it is, to have a friend that will sympathize with us in our deep affliction, and with kind and consoling words pour in the oil and wine into the bruised heart. Again, if anything transpires, to add happiness to the contented mind, how brightly that spark will kindle when shared with a true and faithful friend.

"Our joys, when extended, will always increase.
Our griefs when divided, are hushed into peace."

Under considerations like these ought we not to show ourselves friendly to all? If we meet with a stranger, treat that stranger kindly, for we know not what secret sorrow is his. We little know what painful emotions are throbbing in his bosom. A mild word, or friendly look, or some little act of kindness, may be the means of alleviating much heart-felt sorrow.

USEFULNESS.—It must be a great satisfaction, at the close of life, to be able to look back on the years which are passed, and to feel that you have lived, not for yourselves alone, but that you have been useful to others. You may be assured, also, that the same feeling is a source of comfort and happiness at any period of life. There is nothing in this world so good as usefulness. It binds your fellow-creatures to you, and you to them; it tends to the improvement of your own character, and it gives you zeal or importance in society—much beyond what any artificial station can bestow.



Oliver Cromwell.—From a picture by Walker, in the British Museum.

OLIVER CROMWELL.



ON the 3d September, 1658, died one of the most remarkable men any country has produced—Cromwell, whose character seems to baffle almost in the proportion in which it stimulates our investigation. He was born on the 25th April, 1599, at Huntingdon, England, of highly respectable parents, and by his mother's side, it is said, he was remotely connected with the monarch over whose destinies he was to exercise so great an influence. He was considered an "obstinate" boy, and both at school and college submitted unwillingly to educational discipline. In 1616, he became a member of Sidney college, Cambridge, whence he was removed, at the death of his father, shortly after, and entered at Lincoln's Inn for the

study of the law. He now gave way to the dissipations which surrounded him, and among his other evil propensities at that time was gambling. This life lasted two or three years; at the end of that period, finding he had diminished his fortune, alienated his friends, and, above all, disgusted himself, he made a sudden and lasting reformation. He now married. The object of his choice was Elizabeth Bourchier, daughter of Sir James Bourchier, to whom he was united on the 22d August, 1620, and the match appears to have been a happy one. His attachment to the puritans now began to show itself: some of the most unfortunate appear to have found an asylum in his house. A strong proof of the reality of his religious conviction, as well as of his high moral principle, as given in the circumstance of his returning several sums of money, in one instance as much as 120*l.*, which he had formerly won by gambling, to the losers.

In 1628 his political career began in his return for the borough of Huntingdon, at the period when Charles I., by his arbitrary and tyrannical conduct, was raising up the storm which finally overwhelmed him. In 1635 Cromwell had a farm at St. Ives; but, either from the failure of the speculation, or from the extent of his hospitality, he now suffered from pecuniary embarrassments. He was relieved at the death of his uncle, Sir Thomas Stuart, by a bequest of property to the value of 500*l.* a year in the isle of Ely. A remarkable incident now occurred. Disgusted with the aspect of affairs, religious and political, in this country, and hopeless of any speedy change for the better, he resolved to go to America. He and Hampden, afterward one of the greatest of his coadjutors, were, it is said, actually embarked, when the vessel was detained, with seven others, bound also to America, by an order of council. This little circumstance seems to stamp the depth of Cromwell's piety. The example and society of the "pilgrim fathers" could have little to attract so thorough a hypocrite as Cromwell's enemies have represented him to have been. He now became an active local man of business, and gradually gathered round him a large body of friends and adherents, while with the people generally he became very popular. He first distinguished himself in personal opposition to his sovereign in the matter of draining the fens of the Bedford Level. The earl of Bedford and other gentlemen "adventurers" had obtained a power to drain that immense district, reserving to themselves 95,000 acres as their reward for the accomplishment of the task. When the work was nearly completed, advantage was taken by Charles of some complaints against the "adventurers," by persons who thought themselves aggrieved, to direct his own officers to examine the drainage, with the intention of depriving the rightful owners of their property, if he could but manage to fix some blame upon them. That the nefarious character of the proceeding might not be mistaken, the king, in his instructions, prejudged the case, and the officers reported as he desired. Cromwell was roused at this proceeding, and acted with such vigor and address in the matter, that

the whole county was filled with indignation at the king's conduct. The popular title of lord of the Fens was long applied to Cromwell, and, as a mark of public approbation, he was elected member for Cambridge at the next parliament, in 1640.

A royalist contemporary, Sir Philip Warwick, thus describes his appearance in the house at this period: "I came one morning into the house well clad, and perceived a gentleman speaking, whom I knew not, very ordinarily apparelled; for it was a plain cloth suit, which seemed to have been made by an ill country tailor; his linen was plain and not very clean; and I remember a spot or two of blood upon his little band, which was not much larger than his collar; his hat was without a hat-band; his stature was of a good size; his sword stuck close to his side; his countenance swollen and reddish; his voice sharp and untunable; and his eloquence full of fervor." His mind seems by this time to have undergone a marked change. The applause he had received in the affair of the Fens, the consciousness (perhaps for the first time) of the powers therein apparent, and lastly, the stimulating nature of the events then going on all around him, doubtless quickened the hitherto dormant ambition, and impelled it to seek a wider scope for its exercise. "Henceforth was he a compound of such virtues and vices, of qualities so various and so opposed, that a mind and powers exactly similar to his own were alone perhaps capable of literally developing his career. Religious to the last in his private and domestic conduct, he accustomed himself to the practice of a greater or less degree of dissimulation throughout his public life. Enthusiastic to a high degree in the cause he had espoused, he yet calculated consequences one by one as they occurred with almost unfailing exactness. So simple were his language and manners, that he appears incapable of disguising a purpose that had arisen in his mind; yet by penetration and address the most exquisite did he, at the same time, so read the hearts and so accommodate himself to the humors of all with whom he associated, as at once to make them his firm friends, and footstools to his future elevation over them. His existence became a perpetual

harlequinade; his expressions shifting from the spiritual to the coarsely jocular; his conduct from the pliant to the overbearing—from the submissive to the most vehement contradictions and the boldest opposition. He could enter with an equal zeal into the occupations of preaching, fighting, and reigning; was equally at home in the prayer-meeting, the camp, and the palace. Meanwhile, in every change of time and circumstance, religion, far from contracting, enlarged her hold upon his feelings, but gradually deserting his judgment, the success that attended all his undertakings taught his enthusiasm so greatly to extend it in idea, that finally his every action appeared to him directed by a heavenly guidance, and his very crimes the offspring of a decreed necessity, or instruments to execute upon earth God's righteous vengeance."

In 1641, the parliament remonstrated boldly with the king on his unconstitutional and oppressive acts, and Cromwell, with Pym, Hampden, and other democratic leaders, warmly supported it. When it became apparent to all parties that the sword alone could decide the differences between the king and the people, Cromwell raised a troop of horse in his own county, and, on the actual breaking out of the civil war, acted with such vigor and address as to repress all royalist movements in the neighboring counties, and keep them from the first devoted to the parliament. Not the least extraordinary trait in Cromwell's character was his military genius. Without experience, or having had anything like a military education, commencing the study at a period of life when most other commanders have achieved their reputation, and although frequently placed in the most desperate situations, *he was never beaten*. At Marston Moor, Stamford, and Newbury, he successively overthrew the king's forces, and at last obtained so signal a reputation, that the parliament excepted him from its "self-denying ordinance," passed to prevent members of the house of commons from holding any command in the army. At the battle of Naseby, in 1645, Cromwell commanded the right wing, and was the chief agent in the obtaining that signal victory. Thanks were voted to him in

the following year, and a pension settled upon him to the amount of 2,500*l.* a year.

The great events which followed in rapid sequence are well known. The king in despair threw himself upon the Scottish army, which had entered England in pursuance of the "solemn league and covenant" made between the parliaments of the two countries. By the Scots he was delivered up to the parliamentary commissioners. Cromwell and his party, the independents, were now in great danger from the presbyterians, who commanded a majority in the house of commons, and who, flushed with the consciousness of their strength, endeavored, with that intolerance of spirit which was their great distinguishing characteristic as opposed to the independents, to crush all other sects, and in particular to disband that very army to which they owed all their successes, in order to form a new one more in accordance with their own tenets. The soldiery resisted, and thus was begun the struggle which in a measure compelled Cromwell to take many of those arbitrary steps for which his ambition has had the discredit. One Cornet Joyce, at the head of a party of horse, obtained possession for the army of the person of the king, and Cromwell that very day left London to avoid being seized by the presbyterians and sent to the Tower. He was received with shouts by the soldiery, and a solemn engagement was entered into not to disband or divide without redress of grievances, security against oppression to the whole freeborn people of England, and the dismissal of the presbyterians from the government. Negotiations were now commenced by all parties with the king, while at the same time the army marched toward London, meeting in their way a large minority of the parliament, consisting of course of independents, while many of the presbyterians fled on its approach. There seems no cause to doubt the sincerity of Cromwell in his endeavors to replace Charles on the throne, though on a more equitable foundation; while the bad faith of the king is certain, and ultimately caused the treaty to be brought to a sudden conclusion. Charles now made his escape, but was again detained in the isle of Wight. The republicans of

the army, who formed by far the most numerous part of it, seem to have been dissatisfied with Cromwell for not proceeding faster and more boldly in that course, which, when he did pursue it, brought down every kind of opprobrium on his name. They now gave him plainly to understand that he must join them or be sacrificed. He did join them, though not till he had completely put down the more violent and ultra of the party, and from that time all thought of the restoration of the king appears to have been given up. The presbyterian majority was made a minority by the very simple though not very constitutional application of Colonel "Pride's purge," that officer being stationed at the door of the house of commons to arrest a great number of the principal presbyterians as they entered. It was the remainder of this parliament that determined upon the trial of the king, and caused their determination to be carried into effect, which resulted in his execution before Whitehall. During the sittings which took place in Westminster hall, Cromwell attended regularly every day. When the sentence was known, many applications were made to him to interfere and stay the execution. To Colonel Cromwell, his cousin, who thus applied, he said, "Go to rest, and expect no answer to carry to the prince, for the council of affairs have been seeking God, as I also have done, and it is resolved by them all that the king must die."

Cromwell was now employed in Ireland, which had rebelled, and he reduced it to submission in an almost incredibly short space of time, but not without the committal of cruelties upon the unhappy natives, a crime from which he was remarkable free in all his other campaigns. The next very important incident was the battle of Dunbar, in 1650, where he defeated the Scots, who had taken up the cause of Charles II., and were about to invade England. In this engagement Cromwell's military genius shone out most brilliantly. He defeated an army of 27,000 men with only 12,000, and that too under the greatest disadvantages of position. This battle furnishes two instances of his religious enthusiasm amounting almost to sublimity. The Scots were on

the hills, Cromwell on the plain at their feet: the latter, seeing no hope of drawing them from their position, sent round, during the night preceding the battle, a detachment to the enemy's rear, to attack them in a weak part. While this manœuvre was in progress of execution, Cromwell beheld, at daybreak, most unexpectedly, the Scots descending to attack him. He at once cried out, "God is delivering them into our hands! They are coming down upon us!" Again, in the thick of the fight, he beheld the sun just beginning to appear, and immediately his voice was heard grandly pealing out, while his arm was seen directed toward the glorious luminary, "Now let our God arise, and his enemies shall be scattered!" Charles II. having in the interim marched into England, Cromwell hastily followed, overtook, and totally defeated him at Worcester. He now received additional honors and pensions. On the 20th April, 1653, the struggle between the independents and the presbyterians was again summarily decided in favor of the former, for the time, by the famous dissolution of the long parliament. This parliament first met on the 3d November, 1640, in the reign of Charles I., and was the longest, with one exception, of any on record. After Cromwell had entered the house, he addressed himself to St. John the chief justice, telling him that "he was come to do that which grieved him to the very soul, and that he had earnestly, with tears, prayed to God against it, nay, that he had rather be torn in pieces than do it, but that there was a necessity laid upon him therein, in honor to the glory of God and the good of the nation." This was spoken so as not to be generally heard. Immediately after he called to Major-General Harrison, who was on the other side of the house, to come to him, and to him he declared that "he judged the parliament ripe for a dissolution, and this to be the time of doing it." Harrison requested him to consider seriously before attempting a thing so great and dangerous. "You say well," he replied, and sat still for about a quarter of an hour longer, till the debate having closed, the question was about to be put. He then said again to Harrison, "This is the time I must do it," and sud-

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Cromwell Dissolving the Long Parliament.



denly starting up, first addressed some violent reproaches to the speaker, alleging that the parliament had cheated the country, and displayed only the grossest venality; and then, stamping with his foot, he, in a furious manner, desired the speaker to leave the chair, and called out to the house, according to Bate, "For shame! get you gone! give place to honest men, and those that will more faithfully discharge their trust." Ludlow says, he told them that the Lord had done with them, and had chosen other instruments for the carrying on his work that were more worthy.

Although several of the members rose, one only had the boldness to speak, in spite of his commands that they should remain silent. This member, who has been thought to be Sir Peter Wentworth, inveighed in bitter terms against the atrocity of the proceeding. He had not, however, uttered more than a sentence or two, when Cromwell, stepping into the middle of the house, cut him short, by exclaiming "Come! come! quick, put an end to your sitting; call them in! call them in!" Two files of musketeers now marched into the house. On this, Sir Harry Vane called out from his place, "This is not honest; yea, it is against morality and common honesty."—"Oh! Sir Harry Vane! Sir Harry Vane!" answered Cromwell, "the Lord deliver me from Sir Harry Vane!" He followed these words by a string of invectives addressed to other individual members. The whole was now a scene of confusion and uproar. This is the moment which West has chosen. The speaker is still in his chair, in vain endeavoring to calm the disorder. The clerks also retain their places at the table; but in front of that stands the dictator, pointing with emphatic contempt to the mace, the venerated symbol of the dignity of the assembly, and calling to one of the soldiers, who is obeying his orders, "Take away that fool's bauble." Of the rest of the troops, some are at his back, and others are seen with their raised halberds mixed with the members in every part of the house, and endeavoring to prevent the attempts of several of them to speak. The person on the left in our engraving, who is seen stretching forth

his hands in an attitude of such vehement enthusiasm, and who has evidently arrested Cromwell's eye as he is issuing his command for the removal of the mace, may be supposed to be Wentworth or Vane protesting against that last excess of indignity and outrage. The speaker, having declined to leave his chair until he was forced, was handed down from it by Harrison. All the other members then retired, Cromwell remaining till the last had left the house. He then ordered the doors to be locked, and walked away.

A new parliament was summoned, in the persons of 139 members, to whom Cromwell's writs were directly addressed, and who were upon the whole men of good family or of military distinction, though mixed with some inferior personages; among them one whose name was given to the parliament in derision, Barebone. On the 16th December, 1653, he assumed the title of lord high protector of England, Scotland, and Ireland. It is well known that he wished to have been king, but a considerable portion of his most faithful adherents in the army were opposed to that desire; accordingly, when he was formally invited to assume the crown, he declined. Like his unhappy predecessor, Cromwell dissolved parliament after parliament, but certainly not, like him, with the evident intention of creating a despotic authority.

From the time that Cromwell's influence directed the foreign relations of the country, it is astonishing to see the respect and fear the very name of England inspired. The Dutch, with their famous admiral Van Tromp, were signally defeated, and stripped of their pretensions to the sovereignty of the seas; Jamaica, was annexed to its dominions; the Spaniards were compelled to sue for peace after some severe defeats in the low countries; and everywhere English alliance and English friendship were courted, and not unfrequently in the most servile manner. The last days of Cromwell appear to have been much embittered by the dread of assassination, which the chivalric royalists, as they delighted to consider themselves, did not hesitate openly to recommend. He wore armor under his dress; never stirred without his guards; he became morose and

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melancholy. The death of his favorite daughter, Lady Claypole, whom he loved with the deepest and tenderest affection, gave the finishing stroke to his unhappiness. It is by no means an improbable supposition that the days of the stern ambitious protector of England were shortened by that romantic and not uncommonly disbelieved malady, a broken heart. He died on the anniversary of his two battles of Dunbar and Worcester, in the sixtieth year of his age. He was buried with the greatest pomp and magnificence; but the miserable spite of Charles II. could not allow his remains to rest in peace; they were taken up at the restoration, hung upon the gallows at Tyburn, and then flung into a hole at its foot.

CAUSE OF THE AMERICAN REVOLUTION.



WHEN President Adams was minister at the court of Saint James, he often saw his friend and countryman, Benjamin West, the late president of the royal academy. Mr. West always retained a strong and unyielding affection for his native land. Mr. West one day asked Mr. Adams if he should like to take a walk with him, and see the cause of the American revolution. The minister having known something of this matter, smiled at the proposal, but told him that he should be glad to see the cause of that revolution, and to take a walk with his friend West anywhere. The next morning he called according to agreement, and took Mr. Adams into Hyde park, to a spot near the Serpentine river, where he gave him the following narrative: "The king came to the throne surrounded by flattering courtiers, one of whose frequent topics it was, to declaim against the meanness of his palace, which was wholly unworthy of a monarch of such a country as England. They said there was not a

sovereign in Europe who was lodged so poorly—that his sorry, dingy old brick palace of St. James looked like a stable, and that he ought to build a palace suitable to his kingdom. The king was fond of architecture, and would therefore listen to suggestions which were in fact all true. This spot you see bare was selected for the site, between this and this point, which was marked out. The king applied to his ministers on the subject; they inquired what sum would be wanted by his majesty, who said that he would begin with a million. They stated the expenses of the war, and the poverty of the treasury, but his majesty's wishes should be taken into full consideration.

"Sometime afterward the king was informed that the wants of the treasury were too urgent to admit of a supply from their present means, but that a revenue might be raised in America, to supply all the king's wishes. This suggestion was followed up, and the king was in this way first led to consider, and then to consent to the scheme for taxing the colonies."

THE REIN-DEER.



THE rein-deer, an animal of the most important service in the districts of which it is native, is found nowhere but within the polar regions. Several attempts have

been made to introduce it into more temperate climates, but they all failed.

From the earliest times the rein deer appears to have been domesticated by the Laplanders; and that dreary region owes to this animal whatever it possesses of civilization, and whatever comforts tend to render it supportable to the inhabitants.

The Laplanders are divided into two very distinct classes; one who are settled in their habits, living on or near the coast, and supporting themselves by fishing; the other inhabiting the mountains, and wandering through the summer and winter with no shelter but their tents, and no

provision but their rein-deer. These valuable animals, however, are subject to a visitation in the summer which compels their owners to repair to the coast, frequently an arduous journey, in order to mitigate their sufferings and preserve their lives.

It is well known, from the account of those travellers who have visited Lapland during the summer months, that the interior parts of it, particularly its boundless forests, are so infested by various species of gnats and other insects, that no animal can escape their incessant persecutions. Large fires are kindled, in the smoke of which the cattle hold their heads, to escape the attack of their enemies; and even the natives themselves are compelled to smear their faces with tar, as the only certain protection against their stings. No creature, however, suffers more than the rein-deer from the larger species (*æstrus tarandi*), as it not only torments it incessantly by its sting, but even deposes its egg in the wound it makes in its hide. The poor animal is thus tormented to such a degree, that the Laplander, if he were to remain in the forests during the months of June, July, and August, would run the risk of losing the greater part of his herd, either by actual sickness, or from the deer fleeing of their own accord to mountainous situations to escape the gad-fly. From these causes the Laplander is driven from the forests to the mountains that overhang the Norway and Lapland coasts, the elevated situations of which, and the cool breezes from the ocean, are unfavorable to the existence of these troublesome insects, which, though found on the coast, are in far less considerable numbers there, and do not quit the valleys; so that the deer, by ascending the highlands, can avoid them.

Early in September the herds and their owners leave the coast, in order to reach their winter quarters before the fall of the snows. With the approach of winter, the coat of the rein-deer begins to thicken, and like that of most other polar quadrupeds to assume a lighter color. It is, however, when the winter is fairly set in that the peculiar value of the rein-deer is felt by the Laplanders. Without him, communication would be almost utterly suspend-

ed. Harnessed to a sledge, the rein-deer will draw about 300 lbs.; but the Laplanders generally limit the burden to 240 lbs. The trot of the rein-deer is about ten miles an hour; and the animal's power of endurance is such, that journeys of one hundred and fifty miles in nineteen hours are not uncommon. There is a portrait of a rein-deer in the palace of Drotningholm (Sweden), which is represented, upon an occasion of emergency, to have drawn an officer with important despatches the incredible distance of eight hundred English miles in forty-eight hours. This event is stated to have happened in 1699, and the tradition adds, that the deer dropped down lifeless upon his arrival.

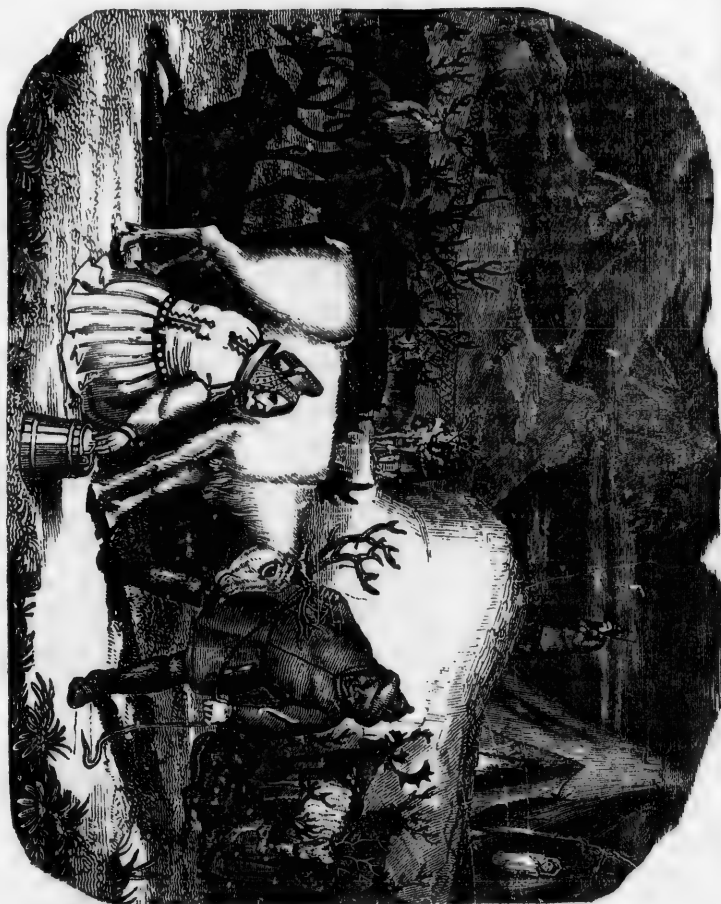
During the winter, the food of the rein-deer is the lichen or moss, which they display wonderful quickness of smell in discovering beneath the snow. In the summer they pasture upon all green herbage, and browse upon the shrubs which they find in their march. They also, it is now well ascertained, eat with avidity the lemming or mountain rat, affording one of the few instances of a ruminating animal being in the slightest degree carnivorous.

Of course, in a country where their services are so indispensable, rein-deer constitute the principal wealth of the inhabitants. The number of deer belonging to a herd is from three hundred to five hundred; with these a Laplander can do well, and live in tolerable comfort.

Von Buch, a celebrated traveller, has well described the evening milking-time, of which a representation is given in our engraving: "It is a new and a pleasing spectacle, to see in the evening the herd assembled round the gamme (encampment) to be milked. On all the hills around, everything is in an instant full of life and motion. The busy dogs are everywhere barking, and bringing the mass nearer and nearer, and the rein-deer bound and run, stand still, and bound again, in an indescribable variety of movements. We never hear the foot on the earth, and nothing but the incessant crackling of his knee-joints, as if produced by a repetition of electric shocks—a singular noise; and from the number of rein-deer, by whom it is at once produced, it is heard at a great distance. When all the herd, consisting

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Milking of the Reindeer



of three or four hundred, at last reach the gamme, they stand still, or repose themselves, or frisk about in confidence, play with their antlers against each other, or in groups surround a patch of moss growing.

HONOR AND TRUTH.



HERE is no prouder title to the respect of our fellow-creatures than the being what is known as—"a man of his word." As there is nothing so mean as treachery, so there is nothing more noble than truth. Never break a promise once given. On no occasion stoop to a falsehood. It is sometimes thought a mark of sharp intellect in trade to overreach a customer, but the morality which sanctions such an act is low, knavish, and contemptible. Dissimulation is rarely to be excused: the meaner vice of simulation never. If you can not reveal the truth, stoop not to counterfeit a lie. It is alike dishonorable to utter a falsehood or to act one. Many persons affect to think that there can be no lying unless in words, and accordingly take great pains to deceive others by looks, words, and deeds. But there is something base as well as wrong in such conduct. We would rather a man would lie to us openly, than cheat and beguile us by such contemptible stratagems. The essence of falsehood is deceit, and he who deceives a neighbor, yet avoids putting the lie in words, is quite as criminal and far meaner than the bold, frank, bad man, who openly violates truth, instead of skulking into corners to outrage her in secret.

In the present day, alas! there is too little regard for truth. The good old-fashioned morality of our sires, which regarded falsehood as the most detestable of acts, has come to be looked on as an obsolete affair, very appropriate for the days of our grandfathers, but not at all fitted for their active, enterprising, and quick-witted descendants. "You *did* him

finely," says the dealer to his clerk, when the latter has succeeded in getting off a lot of goods at the highest prices. "A sharp youngster that," says the merchant, in hearing of the lad, who has, in imitation of his elders, just overreached a customer. "That's a keen fellow: nobody will get ahead of him," we hear continually applied to individuals noted for sharp dealing. Is there any wonder that when deception is thus encouraged, the morals of trade should be loose, or a disregard of truth infect even private life? No man can long maintain two characters—one for the counting house and one for the parlor.

"He who will habitually tell falsehoods is not to be trusted," said Sir Walter Scott, and few men understood human nature better, or scorned base actions more. Parents should remember this. The child who learns to lie will not be long in learning to do worse. The youth who disregards truth, though he may grow up to be apparently a man of rectitude and honor, has a character rotten at the core, and will be tempted into many a mean and discreditable action, thinking that a few false words will conceal his guilt. Oh! suffer any error in a child rather than an indifference to truth. Teach him never—either by word, look, or action—to degrade himself to falsehood. Learn him to loathe a lie. Instruct him that every noble nature, that every man of honor scorns and detests untruth, whether in public or private life, as something inexpressible base.

CURIOUS FACTS ABOUT THE SPIDER.



WE have many examples in the anatomy of animals, of a compensation in the structure of one organ for the defects of another. The ponderous weight of the elephant's head rendered it necessary that his neck should be so short, that it is impossible for him,

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with it, to reach the ground, and even though he might have fed upon shrubs and trees, yet he would not have been able to drink, had not this inconvenience been remedied by the length and flexible nature of the proboscis. The weakness of the legs and feet in the bat, is compensated by the strength of its hook; and the want of web feet in the crane, which has to seek its food in the water, by a long leg, that enables it to wade, and a long bill, by which it can grope.

A scarcely less wonderful instance of this compensation is to be found in the spider—an insect, which however much we are wont to despise, yet claims our serious attention, as exhibiting in its structure and habits, evident marks of benevolent wisdom. It will, perhaps, be well known to our readers, that flies constitute the principal food of this insect; they may not, however, be acquainted with the remarkable fact, that it is furnished with no wings to pursue its prey. To supply this deficiency, it is provided with an apparatus, by which it is able to weave webs for the entangling of its prey, and to fabricate little cells for its own habitations.

A careful examiner of a spider, will perceive little teats or spinners in its body, in which are numerous small tubes, from each of these is drawn a slender thread, and all of these uniting together, a strong compound thread issues from each spinner. The claws with which the creature arranges these threads, are not less delicate in construction than the threads themselves, and answer several important purposes in the economy of the animal.

One species of spider has an apparatus not unlike a carding machine, by which it forms the adhesive parts of the snare. The texture of the threads varies, according to the purpose they are meant to serve—those designed for the web being much more fragile than those intended to shelter the eggs of the female insect from cold, or from the attacks of its enemies.

The manner in which the garden spider fabricates the web from these threads, is exceedingly curious, and well worthy of notice. Its first act is to form a circular outline, which it effects by fastening its threads on every leaf, for a considerable distance around. This accomplished, it

next draws a cross thread from some convenient point in it, to the opposite side, and taking the middle of this, as a centre, it draws out various lines to the circumference, resembling the spokes of a wheel. With the same centre, it spins several circles, fastening its threads to the spokes, and having thus finished its work and tested its security, it returns to its own retreat, generally a cell in the centre of the web, to wait till a vibration of the strings announces the approach of prey. How wonderful the contrivance by which God has thus enabled this little creature to provide for the supply of its wants! Man would have thought it impossible that an insect thus requiring smaller creatures for its support, and yet possessing no means of following them in their flight, could have continued in existence; but the goodness and the wisdom of God have abundantly provided for this emergency.

It surely then can not become us to despise or wantonly to destroy an animal on which he has bestowed so much of his gracious care. Is it not rather our duty to learn some of those lessons it is so well calculated to teach of the power, wisdom, and benevolence of the great Creator? We may be assured that the more we contemplate him in his works, the more will our admiration be excited, our humility deepened, our gratitude strengthened, and our love inflamed.

GLEANERS OF THE PONTINE MARSHES.



THE whole of the Campagne, or plain of Rome, from the Tiber to the mountains on the frontier of the Neapolitan kingdom, is marshy, and during the summer months most unhealthy; but the southern part of this tract, called, *par excellence*, the "Paludi" (or the marshes) is more particularly distinguished for its insalubrity. From Torre Tré Ponti to Tersaxina, a

distance of twenty-five miles, the land is low and flat, and in some parts, both inland at the foot of the mountains and near the seashore, covered with water. In breadth from the sea-line to the Apennines, the district varies from ten to twelve miles, and on this wide expanse there is scarcely a hillock, scarcely a tree. It is traversed by a noble road, as straight as an arrow; the high-road from Rome to Naples, running in part over the celebrated Via Appia, which was laid down in the time of the Roman republic, about three centuries before the Christian era. In travelling along this road, the eye ranges over a rich expanse of pasture and corn lands, the cultivated part, however, bearing but a small proportion to the pasturage. Not a hedge, not a fence of any kind, occurs for many miles, the limits of the vast farms being merely marked by *termini*, or stones sunk in the ground. Scarcely a human habitation is to be seen, except at very wide intervals a large gloomy *casale*, looking more like a fortress than a peaceful farm-house.

Smiling under a clear blue sky, and lit up by a glorious summer sun, this great flat, though monotonous, is for a while pleasant to look upon. Green and smooth, it is not unlike many parts of Cambridgeshire, or the more open parts of the fens of Lincolnshire; but the same causes—an insufficient drainage, and the vicinity of stagnant waters, which in England produce ague, here, in a hotter climate, generate malaria fevers of the worst description. Hence, beyond a few families whose chief occupation is taking care of herds of buffaloes and wild cattle that range the waste, there is no fixed population in the Pontine marshes. About the end of October, when the great heats of summer, which render the plain unhealthy, have ceased, the poor and laborious peasants of the Apennines come down from their mountains in bands and perform the necessary labors. Some few stay till May, but in general they return as soon as they have finished their ploughing and sowing. At harvest-time, which occurs about the middle of June, they descend again to the low country, and our engraving represents the arrival of a family party with all its baggage and appurtenances. The engra-

ving is from the design of a German artist, Robert, who has given the scene with admirable truth and nature. It is common for a family to move with all its members, from the hoary grandfather to the infant in arms, and to carry all their simple household goods and moveable property with them. The senior of the party acts as "caporale," or head man, arranges the job with the factor or farmer, and receives the wages of his children and grandchildren. When they reach the scene of their operations they unload their car, and sometimes set up a rude sort of tent to shade them at their meals, and protect them from the dews at night. This care, however, is not always taken, and many of them eat and sleep without any shelter, spreading their blankets on the bare ground. They sometimes make temporary huts of bulrushes and canes, which grow to a prodigious height in the more marshy parts of the plains. Where the soil is very damp, we have sometimes seen these huts set upon poles at the height of six or eight feet from the ground. The occupants, who only use them for sleeping, climb up and enter by an aperture, which is rather a hole than a door-way: a structure of this kind looks like a gigantic bee-hive, or an Indian wigwam set upon stilts.

In the daytime, while the men and women are all at work, the children, where there are any, are carried to the field, and set down on the ground near the reapers, for wolves are not unfrequent visitors in these marshes. The peculiar way of swaddling infants, which is common in all the south of the Peninsula, has not escaped our artist's attention. The little creatures are bound and wrapped round and round, until, in their lower extremities, they look like Egyptian mummies. Though this practice, by which the legs are confined and allowed no play, should not seem a very judicious one, the peasants, and the *lazzaroni* of Naples, among whom it is equally prevalent, are, generally speaking, a remarkably fine-legged generation. The spare food and the hard life led by these poor mountaineers, have been described in accounts of the management of the great farms of the Maremma. Although, putting the best face on a bad business, they arrive

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Gleaners of the Pontine Marshes.



piping and dancing, it is seldom that they can return in the same merry mood, the malaria fever being pretty sure to seize one half of them more or less violently. As soon as the corn is cut, the reapers make all the haste they can from the pestilential flat, which, by the month of July, becomes so dangerous that few or none will venture to remain in the fields by night. The livid aspect of those few families that are bound to the spot is indeed a shocking proof of its unwholesomeness. We remember few things more pathetic than the reply that one of these walking spectres made to a traveller who was struck with the abundant sources of disease, and the sickly appearance of the people. "How do you manage to live here?" (*Come si vive qui*), said the stranger. (*Signor, si muore*), "Sir, we die." Some of these parties of reapers have many miles to travel before they reach their homes on the healthy mountains. They walk along in troops, the healthy supporting the sickly; for it is only a few of the better sort that can command the luxury of riding in a buffalo-car. These vehicles are of the most primitive or rudest description: one solid piece of wood, roughly hewed, forms axle-tree and axles, and upon this the wheels revolve with a fearful noise of which our word "creaking" conveys no idea: they scream, shriek, and groan. We have often heard them at more than a mile's distance. The beasts that draw them are the most sulky and savage of all domesticated quadrupeds, and are sometimes known to throw down their driver and press him to death. The strength of this species of buffalo, which attains its highest perfection in the low marshy lands of the Roman and Neapolitan states, is, however, prodigious. A pair of them will draw an immense car heavily laden over the roughest roads, and across the bed of a river, if necessary, with the water over their shoulders. On such occasions they keep their snouts erect, and above the water, blowing like hippopotami. In many parts of the country, where there are no bridges to cross the numerous mountain streams, all communication would be interrupted at certain seasons of the year, if it were not for the strength and aquatic habits of these animals.

SEPTEMBER.



HIS, though now the ninth month of the year, was formerly the seventh as its name imports, being derived from the two Latin words *Septem* and *Imber*. The Saxons called it *Gerst-monat*, or barley-month.

This is, in general, a very agreeable month; the distinguishing softness and serenity of autumn, with its deep blue skies, prevailing through great part of it. The days are now very sensibly shortened; and the mornings and evenings are chilly and damp, though the warmth is still considerable in the middle of the day. This variation of temperature is one cause why autumn is an unhealthy time, especially in warmer climates and moist situations. Those, who are obliged to be abroad early or late in this season, should be guarded by warm clothing against the cold fogs.

Toward the end of this month, the chimney or common swallow entirely disappears. There are various opinions concerning the manner in which these birds dispose of themselves during the winter; some imagining that they all fly away to distant southern regions, where insect food is at all times to be met with; others, that they retire to holes and caverns, or even sink to the bottom of ponds and rivers, where they pass the winter months in a torpid, and apparently lifeless state. That many of them migrate to other countries, seems sufficiently proved. The swift, the swallow, and one of our martins, have been seen at Sierra Leone and the island of St. Thomas, in the months of January and February: they have been traced in their course across Spain and Portugal; but some, probably, always stay behind, which are the younger broods, or smaller kinds, that are incapable of so long a flight, and perish. For some time before their departure, they begin to collect in flocks, settling on trees, basking on the roofs of buildings, or gathering round towers and steeples, whence they take short excursions, as if to try their powers of flight.

Not only the swallow tribe, but many

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OAK-BARK PEELERS.

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other small birds which feed on insects, disappear on the approach of cold weather, when the insects themselves are no longer to be met with.

Those sweet and mellow-toned songsters, the wood-lark, thrush, and black-bird, now begin their autumnal music: but it is not the full joyous note of spring: frequently the song proceeds from the young birds of the year imitating the parental note, and influenced by the state of the temperature.

Two or three species of lady-birds are found at this time, and this is the principal season for the death's-head moth: "This creature," says Mr. Knapp, "was formerly considered as one of our rarest insects, and doubtful if truly indigenous; but for the last twenty years, from the profuse cultivation of the potato, is become not very uncommon in divers places. The markings on its back represent to fertile imaginations, the head of a perfect skeleton, with the limb-bones crossed beneath."

The most useful fruit this country affords, the apple, successively ripens, according to its different kinds, from July to September or October; but the principal harvest of them is about the close of this month. They are now gathered for cider making, which in some countries is a busy and important employment.

OAK-BARK PEELERS.



ARK is the outward covering of plants and trees, one of its functions being to protect the inner structure from the effect of sudden changes of temperature. On this account, the bark of the pine-trees which are found in the most inclement regions of North America is often from a foot to fifteen inches in thickness. Another of its uses is to convey to the roots those juices which are elaborated in the foliage. In a young plant the bark is covered with a smooth thin skin; but the expansion of

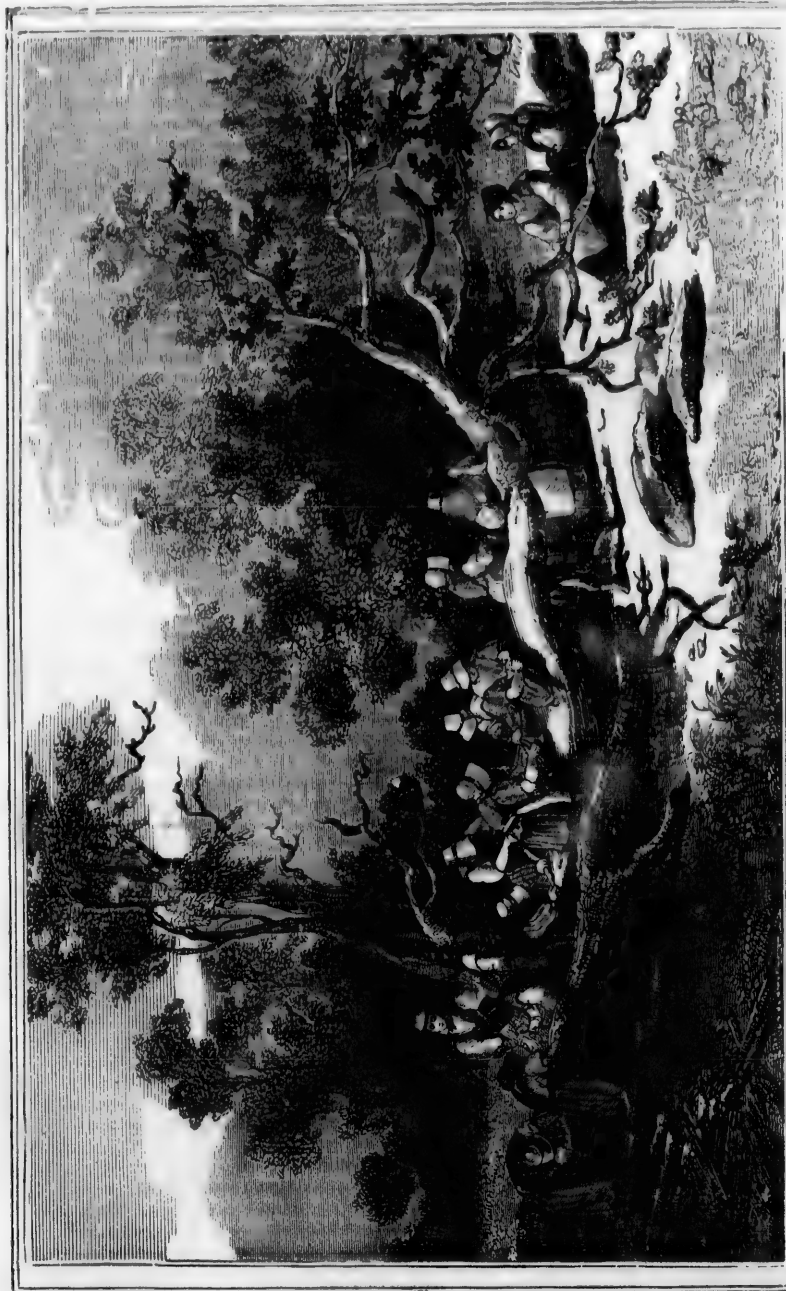
the wood in a few years causes the bark to assume a rough appearance, the continued growth rending it in a perpendicular direction, as may generally be seen in all aged trees. In the birch-tree, owing to the peculiarity of the bark, strips of it are continually peeling off, being no longer adapted for their intended purposes.

Corks are formed from the dead bark of the cork-tree, which is taken off at certain seasons of the year, being separated without difficulty from the portions of more recent growth. The vigor of a tree is said to be improved by being barked once every eight or ten years after it is fifteen years old; some which have regularly submitted to this operation living for 150 years.

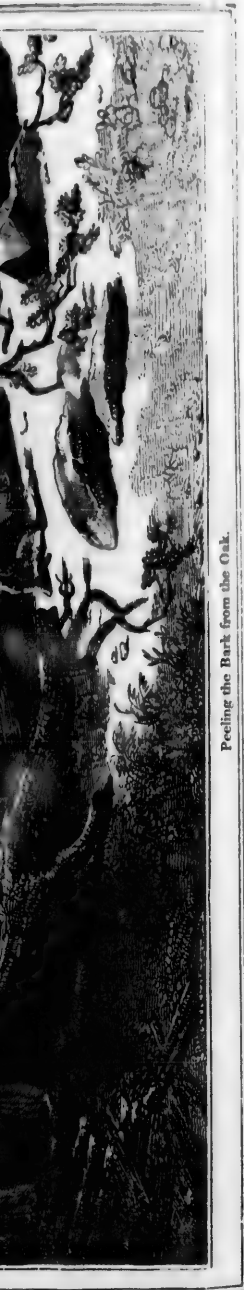
A description of oak growing in the United States produces the quercitron bark, which forms so important an article as a yellow dye. The medicinal value of the Peruvian bark has been known about two centuries, but it was not until fifty years after its introduction in Europe that its qualities were duly appreciated. The original *cinchona* of Peru, which is of a pale color, is becoming scarce. When dry it is scarcely odorous, but becomes so when used as an infusion. The two other descriptions are the red bark and the yellow bark. The fruit is less bitter than that of the *cinchona*, but its astringent qualities are greater. The nearer the second approaches the color of an orange the better is its quality: it is comparatively worthless when it assumes a hue between red and yellow. It is bitter to the taste, but its properties are not astringent.

The bark of a tree always contains a greater proportion of the principle of a plant than any other organ. Oak-bark possesses a chymical property which is used in converting hides into leather. The astringent quality which effects this is called *tannin*. Heath, gall-nuts, birch-tree bark, myrtle leaves, leaves of wild laurel, and willow-bark, have been used as substitutes for oak-bark, and even oak sawdust.

Before being used in tanning, the bark is ground into coarse particles, and a layer is put upon each skin in the tan-pit. Without bark or *tannin* the skins would dissolve into glue, but the astringency which it pos-



Feeling the Bark from the Oak.



Peeling the Bark from the Oak.

several occasions a process exactly the reverse, and forms the substance called leather.

The engraving accompanying this article represents a party of women engaged in peeling the bark from an oak-tree. This operation is performed in the following manner: a number of women called "bark-ers" are each furnished with light short-handled mallets made of hard wood, about eight or nine inches long, three inches square at the face, and the other end sharpened like a wedge, in order the more easily to make an incision in the bark, which is done all along the side of the tree which happens to be uppermost, in a straight line; and as two barkers generally work together, it is proper that while one is employed in making an incision with the mallet, the other, being furnished with a pointed instrument called the "barking-bill," cuts the bark across the tree in length of from two feet six inches to three feet, and then, by forcing a shovel-shaped instrument called a "peeling-iron" between the bark and the wood, easily separates the former, and peels it from the timber in entire pieces. The larger branches are afterward stripped in a similar manner. This business being chiefly done in the early spring season, the vast trunks are left in the situations in which they first fell till the gathering of the crops in autumn permits their removal. During this time they get blanched to almost perfect whiteness, and in the midst of the summer verdure have a very singular but picturesque appearance.

The bark, when peeled, is carefully dried for two or three weeks, and then piled in stacks of about eight feet square by fifteen feet in height, and sold to the tanner.

GENEROSITY.—There is a great distinction to be made between generosity of *manner* and generosity of *heart*. A good man, with the noblest sentiments and feelings, is sometimes disguised by a certain coldness and formality of manner; while a libertine, whose life is spent in the gratification of self, imposes on the multitude, by the bravery and frankness of his air, for a most generous-hearted fellow.

ANIMAL LANGUAGE.



LANGUAGE—as far as the communication of ideas by certain modes of contact, by gesture, or by sounds, can be called by that name—seems to be possessed in

common by all living creatures. The first or simplest form in which this faculty is manifested among animals, is that of contact—a species of intercommunication beautifully illustrated by the habits of such insects as the ant. If you scatter the ruins of an ant's nest in your apartment, you will be furnished with a proof of their language. The ants will take a thousand different paths, each going by itself, to increase the chance of discovery; they will meet and cross each other in all directions, and perhaps will wander long before they can find a spot convenient for their reunion. No sooner does any one discover a little chink in the floor, through which it can pass below, than it returns to its companions, and, by means of certain motions of its antennæ, makes some of them comprehend what route they are to pursue to find it, sometimes even accompanying them to the spot: these, in their turn, become the guides of others, till all know which way to direct their steps. The mode of communication employed by bees, beetles, and other insects, is much of the same nature, being almost entirely confined to contact, and rarely or ever partaking of gesticulation, which may be considered as the next form of language in the ascending scale.

In expressing their wants, feelings, and passions, almost all the higher animals make use of gesticulation. The dog speaks with his eye and ear as significantly as he does by his voice: the wagging of his tail is quite as expressive as the shake of a human hand: and no pantomime could better illustrate conscious error, shame, or disgrace, than his hanging ears, downcast look, and tail depressed, as he slinks away under rebuke. The dog, indeed, is an admirable physiognomist,

whether actively or passively considered. If you can read craving, fear, or anger, in his countenance, so he will kindness or surliness in yours, just as readily as he can interpret the physiognomy of one of his own species. Observe that huge mastiff gnawing a bone on the other side of the street, and see how the Newfoundland that is coming up on this side deports himself. First he stands stock-still: not a muscle of his frame is moved: the mastiff takes no notice of him. Next, he advances a few steps, looks intently, wags his tail once or twice: still not a glance from the mastiff, which is evidently striving not to observe him. On the Newfoundland goes, with an indifferent amble, keeping as closely to this side as he can, and thinks no more of the mastiff. Had the latter, however, lifted his head from the bone, had he exchanged one glance of recognition, had he brushed his tail even once along the pavement, the Newfoundland would have gone gambolling up to him, even though the two might have had a tussle about the bone in the long-run. Here, then, is an example of strict physiognomy or pantomime, quite as well understood between animals as the most ardently-expressed sounds. Again, mark that couple of terriers, bound on a secret rabbiting excursion to yonder hill-side. Two minutes ago, that shaggy native of Skye was dozing on his haunches, as little dreaming of a rabbit-hunt as of a journey to the antipodes. But his little pepper-and-mustard friend awoke him from his reverie, and pricking up his ears, gambolled significantly around him. Next he scampered onward for a dozen of yards or so, looked anxiously back, again scampered forward, looked back, whined, and returned. Then he set out, scenting the ground as if he had made some important discovery, stopped suddenly, made a short detour, tracking some imaginary scent as eagerly as if a treasure of venison lay beneath his nose. This at length rouses his friend of Skye, and away they trot as slyly to the hill as any couple of poachers. Now our pepper-and-mustard hero is beating the whine-bushes, while his comrade stands outside the cover, ready to pounce on the first rabbit that makes its appearance. Not a whine, not a yelp is

heard—the whole is conducted by signs as significant and as well understood as the most ingenious system of marine signalizing.

Independent of the humble kind of expression which gesticulation implies, many of the higher animals are possessed of vocal language, by which they can give the most intelligible utterance to their feelings of delight, pain, fear, alarm, recognition, affection, and the like. Nor does this language differ in aught but degree from that which we ourselves enjoy. Our organs may be capable of a greater variety of tones and modulations: and yet in some cases this is more than questionable: all that can be said is, that the human organization is capable of more perfect articulation, and this articulation is a thing of art, imitation, and experience, depending upon the higher degree of intelligence with which the Creator has endowed us. The brute creation express their feelings and passions by certain sounds, which are intelligible, not only to those of their own species, but in a great degree to all other animals. Man, in his natural state, does little or nothing more. It is civilization—the memory of many experiences, aided by his higher mental qualities—which gives him his spoken language; each new object receiving a name founded on association with previously-known objects, and each conception receiving expression by association with ideas formerly entertained. Nothing of this kind takes place among animals: their limited endowments do not permit of it, as the range of their existence does not require it. Their language may be considered as stationary in a natural state, though capable of some curious modifications under human training, or even under certain peculiar changes of natural condition. It is to this range of animal expression that we would now direct attention.

Take that barn-yard cock, for example, which five minutes ago was crowing defiance from the top of the paling to his rival over the way, and hear him now crowing a very different note of delight and affection to his assembled dames. In a few minutes you may hear his peculiar "cluck, cluck," over some tid-bit he has

discovered to which he wishes to direct their attention ; his long suppressed guttural cry of alarm, if the mastiff happens to be prowling in the neighborhood ; or his soft blurr of courtship, when wooing the affections of some particular female. All of these notes, even to the minutest modulation, are known to the tenants of the barn-yard, which invariably interpret them in the sense they were intended. Or take the barn-yard hen, and observe the language by which she communicates with her young. By one note she collects and entices them under her wing, by another calls them to partake of some insect or grain she has discovered, by a third warns them of danger, should any bird of prey be sailing above, by a fourth calls them away to another place, or leads them home, should they have strayed to a distance. Nor are these various calls known instinctively, as is generally believed, by the young brood. We have watched the habits of the barn-fowl with the closest scrutiny, and are convinced that a knowledge of the mother's notes is, to the young, a process of acquirement : in the same manner as a human child quickly, but nevertheless by degrees, learns to comprehend tones of affection, doting, chiding, and the like. The knowledge of the lower animals is in almost every instance acquired ; a process necessarily more rapid in them than in man, as they much sooner reach the limit of their growth and perfection. Animal language is most perfect and varied among such animals as are gregarious in their habits. Let the most ignorant of natural history attend for a few days to the habits of a flock of birds, a herd of oxen, horses, deer, elephants, or the like, and he will find that they make use of a variety of sounds often totally different from each other. Friendly recognition, hatred, fear, mirth, satisfaction, the discovery of food, hunger, and so on, are expressed each by a peculiar note, which is distinctly and instantly comprehended by the whole flock. And as among men, when simple sounds are insufficient, so among animals gesticulation is made use of to assist the comprehension and deepen the impression.

If then, animals are really in possession of a vocal language, it may be asked, is

that language capable of any modification, improvement, or deterioration ; and have we any evidence to that effect ? That animal language admits of extensive modification, he have ample proof in the history of cage and singing-birds. The natural note of the canary is clear, loud, and rather harsh ; by careful training, and breeding from approved specimens, that note can be rendered clear, full, and mellow, as that of the finest instrument. We have further proof of such modification, in the fact of a young canary being made to imitate the notes of the linnet or the goldfinch, just as either of these may be taught the song of the canary. The starling and blackbird may be trained to forsake their wood-notes wild, and to imitate the human whistle to perfection in many of our national melodies. Nay, the parrot, starling, raven, and even the canary, may be taught to articulate certain words and phrases with more precision and emphasis than the tyroes of the elocutionist. Nor is artificial training always necessary to accomplish such modification ; for we have the gay and lively mocking bird producing, of his own free-will, almost every modulation, from the clear mellow tones of the wood-thrush, to the savage scream of the bald eagle. While thus exerting himself, a person destitute of sight would suppose that the whole feathered tribe had assembled together on a trial of skill, each striving to produce his utmost effect, so perfect are his imitations. He many times deceives the sportsman, and sends him in search of birds that perhaps are not within miles of him, but whose notes he exactly imitates ; even birds themselves are frequently imposed on by this admirable mimic, and are decoyed by the fancied call of their mates, or drive with precipitation into the depth of thickets at the scream of what they suppose to be the sparrow-hawk. The mocking bird loses little of the power and energy of his song by confinement. In his domesticated state, when he commences his career of song, it is impossible to stand by uninterested. He whistles for the dog—Cæsar starts up, wags his tail, and runs to meet his master ; he squeaks out like a chicken—and the hen hurries about with hanging wings and bristling feathers, chucking to

protect her injured brood. The barking of the dog, the mewing of the cat, the creaking of a passing wheelbarrow, follow with great truth and rapidity. He repeats the tune taught him by his master, though of considerable length, fully and faithfully. He runs over the quivering of the canary, and the clear whistlings of the Virginian nightingale or redbird, with such superior execution and effect, that the mortified songsters feel their own inferiority, and become altogether silent, while he seems to triumph in their defeat by redoubling his exertions.

As there is thus an evident capability of modification, so there must, to a certain degree, be improvement or deterioration, as surrounding circumstances are favorable or unfavorable to the development of the vocal power. A young canary brought up in the same room with a goldfinch and linnet, if he does not slavishly adopt the notes of either, will often be found to add them to his own natural music. The natural voice of the dog, so far as that can be ascertained from wild species of the family, is more a yelp and snarl than a bark; and yet what is more full and sonorous than the voice of the Newfoundland or mastiff? The wild horse—depending so much as it does upon the society of its kind—acquires the nicest modulations of neighing, so as to express pleasure, fear, recognition, the discovery of pasture, and so forth; while the labored hack has scarcely, if at all the command of its vocal organs. The voice of animals is just as evidently strengthened and increased in variety of tone by practice, as is that of the human singer and orator, and thus becomes capable of expressing a wider range of ideas. Indeed it is certain that, if animals are placed in situations where the use of their language is not required, they will in a short time lose the faculty of speech altogether. Thus, on the coral island of Juan de Neva, where the dogs have been left from time to time, and where, finding abundance of food, they have multiplied prodigiously, it is asserted that the breed have entirely lost the faculty of barking. We knew an instance of a young canary, just bursting into song, which was rendered permanently dumb by being shut up in a darkened chamber, and by occasionally

having a cloth thrown over its cage, that its notes might not disturb an invalid. This treatment was continued for several months; and so effectually did it destroy the clear, brilliant notes of the youngster, that he was never afterward known to utter a note beyond a simple "tweet, tweet" of alarm. As the human speech is affected by disease and old age, so likewise is that of the lower animals. The husky, paralytic voice of the old shepherd-dog, is a very different thing from the full-toned bark of his athletic years; formerly, its modulations could give expressions to joy, fear, anger, reproach, and the like; now, its monotony is destitute of all meaning. We were once in possession of a starling, which we had taught to utter a number of phrases, and to whistle in perfection a couple of Scottish melodies. After a severe moulting attack, not only was his power of voice destroyed, but his memory apparently so much affected, that phrases and melodies were ever after jumbled incoherently together; much like the chattering of an old man in his dotage, or like those individuals who, after severe fevers, forget some of the languages they have acquired, or make themselves intelligible through a new jargon of English, French, and Latin phrases.

But it may be asked—if the lower animals thus make use of a vocal language, are those to whom it is addressed at all times capable of interpreting its meaning? The well-known habits of gregarious animals, in our opinion, ought to answer this question. Every individual, in a herd of wild horses or deer, most perfectly understands every gesture and sound of the watch or leader, which is stationed for the general safety. Nor is such understanding altogether instinctive, but a process of training and tuition quite analogous to what takes place in our own case. Further, the speech, if we may so call it, of one animal is not only understood by the animals of its class, but in a great measure by the other animals that are in the habit of frequenting the same localities. Thus the chaffinch, which discovers the sparrow-hawk sailing above, instantly utters a note of alarm—a note known not only to the other chaffinches, but understood and acted upon by all others of the feathered

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THE HALLS OF THE MONTEZUMAS.

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race within hearing. The suspension of every song, the rustling into the thicket beneath, the sly cowering into the first recess, or the clamor of impotent rage, abundantly attests how well they have interpreted the original note of alarm. But if all other evidence were wanting of the capacity of the lower animals to interpret other voices than their own, the fact that many of them learn to interpret human words, and to distinguish human voices, would be sufficient attestation. Thus the young horse taken from the hills, learns in a few months to discriminate the words spoken to him by his driver; and so do the ox, the dog, and other domesticated animals. This comprehension of vocal sounds evidently implies a sense of language—a sense that, on their part also, the expression of certain sounds will meet with a certain interpretation.

Such is the language of the lower animals: limited, no doubt, when compared with that of the human race; yet all-sufficient for their wants, and only inferior because not combined with that higher intelligence which, after all, forms the true distinction between man and his fellows of the animal creation.

THE HALLS OF THE MONTEZUMAS.



MONTEZUMA II., ascended the Mexican throne A. D. 1502, at the age of twenty-three, before Mexico had been discovered by Europeans. He died 30th June, 1520, in the forty-second year of his age, of wounds inflicted by the Spanish discoverers whom he had invited to his royal palace. Historians agree in admiring his character.

On ascending the throne, not content with the spacious residence of his father, he erected another, much more magnificent, fronting on the *place mayor* of the present city of Mexico. So vast was

this great structure, that, as one of the historians informs us, the space covered by its terraced roof might have afforded ample room for thirty knights to run their courses in a regular tourney. His father's palace, although not so high, was so extensive that the visitors were too much fatigued in wandering through the apartments, ever to see the whole of it. The palaces were built of red stone, ornamented with marble, the arms of Montezuma's family (an eagle bearing a tiger in his talons) being sculptured over the main entrance. Crystal fountains, fed by great reservoirs on the neighboring hills, played in the vast halls and gardens, and supplied water to hundreds of marble baths in the interior of the palaces. Crowds of nobles and tributary chieftains were continually sauntering through the halls, or loitering away their hours in attendance on the court. Rich carvings in wood adorned the ceilings, beautiful mats of palm leaf covered the floors. The walls were hung with cotton richly stained, the skins of wild animals, or gorgeous draperies of feather-work wrought in imitation of birds, insects, and flowers, in glowing radiance of colors. Clouds of incense from golden censers diffused intoxicating odors through splendid apartments occupied by the *nine hundred and eighty wives* and five thousand slaves of Montezuma.

He encouraged science and learning, and public schools were established throughout the greater part of his empire. The city of Mexico in his day, numbered twice as many inhabitants as at present, and one thousand men were daily employed in watering and sweeping its streets, keeping them so clean that a man could traverse the city with little danger of soiling his feet and his hands. A careful police guarded the city. Extensive arsenals, granaries, warehouses, an aviary for the most beautiful birds, menageries, houses for reptiles and serpents, a collection of human monsters, fish-ponds, built of marble, and museums and public libraries, all on the most extensive scale, added their attractions to the great city of the Aztecs. Gorgeous temples—in which human victims were sacrificed, and their blood baked in bread, or their bodies dressed for food to be devoured by the people at religious

festivals—reared their pyramidal altars far above the highest edifices. Thousands of their brother men were thus sacrificed annually. The temple of Maxtli, their war-god, was so constructed that its great alarm-gong, sounding to battle, roused the valley for three leagues around, and called three hundred thousand armed Aztecs to the aid and service of their monarch. So vast was the collection of birds of prey, in a building devoted to them, that 500 turkeys, the cheapest meat in Mexico, were allowed for their daily consumption. Such were the "halls of the Montezumas!" The summer residence of the monarch, on the hill of Chapultepec, overlooking the city, was surrounded by gardens of several miles in extent, and here were preserved until the middle of the last century, two statues of the emperor and his father. The great cypress-trees, under which the Aztec sovereign and his associates once held their moonlight revels, still shade the royal gardens. Some of them, fifty feet in circumference, are several thousand years old, but are yet as green as in the days of Montezuma, whose ashes, or those of his ancestors, render sacred, in the eye of the native Mexicans, the hill of Chapultepec. Natural decay and a waning population now mark the seat of power of the great Montezumas.

THE PARKS OF ENGLAND.



THE parks abound with trees of extraordinary age and size. They are not like the trees of our original forests, growing up to a great height, and on account of the crowded state of the neighborhood throwing out but few lateral branches; what they want in height they gain in breadth, and if we may be excused for a hard word, in umbrageousness. We measured one in Lord Bogot's celebrated park in Staffordshire, and going round the outside of the branches, keep-

ing within droopings of the circuit, was a hundred yards. The circumference of some of the celebrated oaks in the park of the duke of Portland which we measured together, which he did us the kindness to accompany us through his grounds, seemed worthy of record. The little porter oak measured 27 feet in circumference, the great porter oak 29 feet in circumference, the seven sisters 33 feet in circumference. The great porter oak was of a very large diameter 50 feet above the ground, and an opening in the trunk of green dale oak was at one time large enough for the passage of a small carriage through it; by advancing years the open space has become contracted. These, indeed, are noble trees, though it must be confessed that they were thrown quite into the shade of the magnificent Kentucky buttonwood or aycamore, of whose trunk we saw a complete section at Derby, measuring 25 feet in diameter, and 75 feet in circumference. This was brought from the United States, and indeed well might be denominated the mammoth of the forest.

In these ancient parks, oaks and beeches are the predominant trees, with occasional chestnuts and ashes. In very many cases we saw the beauty and force of that first line in the pastoral of Virgil, where he addressed Tityrus as "playing his lute under the spreading shade of the beech-trees." These trees are looked upon with great veneration; in many cases they are numbered; in some a label is affixed to them, giving their age; sometimes a stone monument is erected, saying when or by whom this forest or this clump was planted; and commonly some family record is kept of them as a part of the family history. We respect this trait in the character of the English, and we sympathize with them in the veneration for old trees. They are the growth often of centuries, and the monument of years gone by.

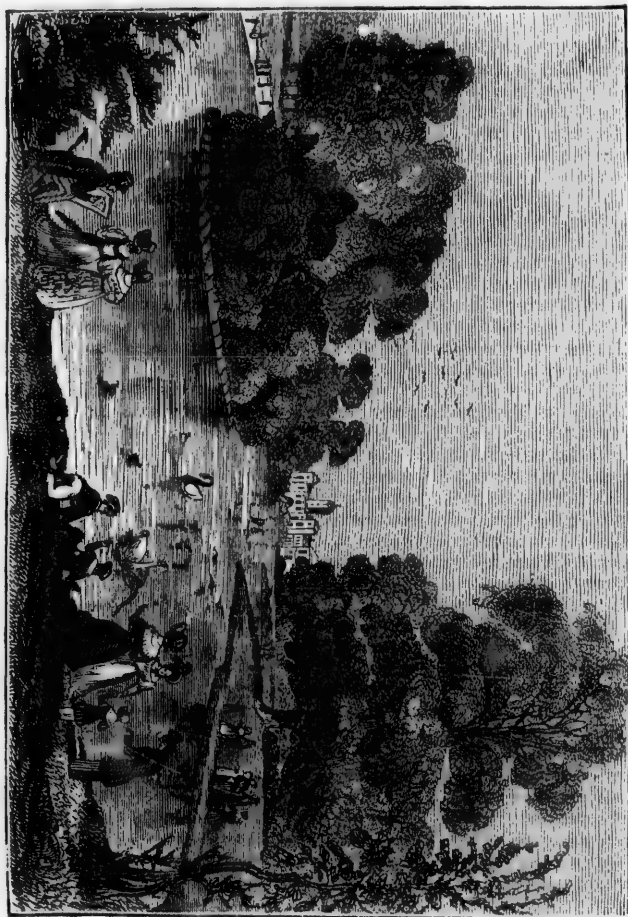
We can not enter into the enthusiasm of an excellent friend, who used to say that the cutting down of an old tree ought to be made a capital offence at law; and we would always advise that an old tree, standing in a conspicuous station either for use or ornament should be at least once more wintered and summered before

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St. James' Park, London



the sentence of death, which may be passed upon it, is carried into execution.

The trees in the park of the palace of Hampton court are many of them, the horse chestnut and the lime, of great eminent beauty; several straight lines of them forming, for a short clear bright day, at the season of their flowering, we passed through this magnificent avenue with inexpressible delight. We passed through them again late in the autumn, when the frost had marred their beauty, and autumnal gales had stripped off their leaves; but they were still venerable in the simple majesty of their gigantic and spreading arms. We could not help reflecting with grateful emotion on that beneficent power, which shall presently breathe upon these apparently lifeless statues, and clothe them with the glittering foliage of spring, and the rich and splendid glories of summer. So be it with those who have got far into the autumn, or stand shivering in the winter of life.

The extent of these parks in many cases filled me with surprise. They embraced hundreds, in some instances thousands of acres, and you enter them by gates, where a porter's lodge is always to be found. After entering the park gates, we have rode sometimes several miles before reaching the house. They are generally devoted to pasturage of sheep, and cattle, or deer. In the park at Chatsworth, the herd of deer are kept at no inconsiderable expense, requiring abundant pasturage in summer, and hay and grain in winter. An English pasture is seldom or never ploughed. Many of them have been in grass beyond the memory of any one living. The turf becomes close and hard; and the feeding of sheep and cattle undoubtedly enriches the land especially under the careful management of one eminent farmer—and many more doubtless, are like him—on whose pasturage grounds the manures of the cattle are daily and evenly spread.

In speaking of the parks in the country, we ought not to pass in silence the magnificent parks of London, as truly magnificent they must be called, including St. James' park, Green park, Kensington gardens, Hyde park, and Regent's park.

Kensington gardens, exclusive of private

gardens, within its enclosure contains 227 acres, Hyde park, 380 acres, Green park, connected with St. James' park, 87 acres; terraces connected with Regent's park, 80 acres—making a grand total of 1,202 acres. To these should be added the large, elegant, and highly embellished public squares in various parts of London, and even in the most crowded parts of the old city, which in all probability, exceed 1,000 acres.

These magnificent parks, it must be remembered, are in the midst of a populous town, including upward of 2,000,000 of inhabitants, are now open to the public for exercise, health, and amusement. They are at the same time, to a degree, stocked with sheep and cows.

It is impossible to over-estimate the value to health of these open spaces, and the amount of recreation and rational enjoyment they afford to this vast population.

Windsor great park contains 3,500 acres, and the little park 300 acres.

THE VEGETABLE KINGDOM.



T is now midsummer—the bright sun shines throughout the long day, diffusing light and heat over the face of nature—the earth is in its full luxuriance; and in the words of Milton, "it were an injury and sul-

lenness against nature not to go forth and taste her beauties, and mingle in her rejoicings with heaven and earth."

What a change a few months has brought about! Lately, the earth was bound up in the severe frosts of winter—not a leaf or a gay blossom was to be seen—all was apparent barrenness and desolation. And so was the earth before it was first clothed with the green herb—a bare, rocky, and barren mass. Vegetables are as it were the clothing of the earth; flowers, shrubs, and trees, its ornaments. There is a softness and appropriateness in the subdued tinge of green, which is with very few

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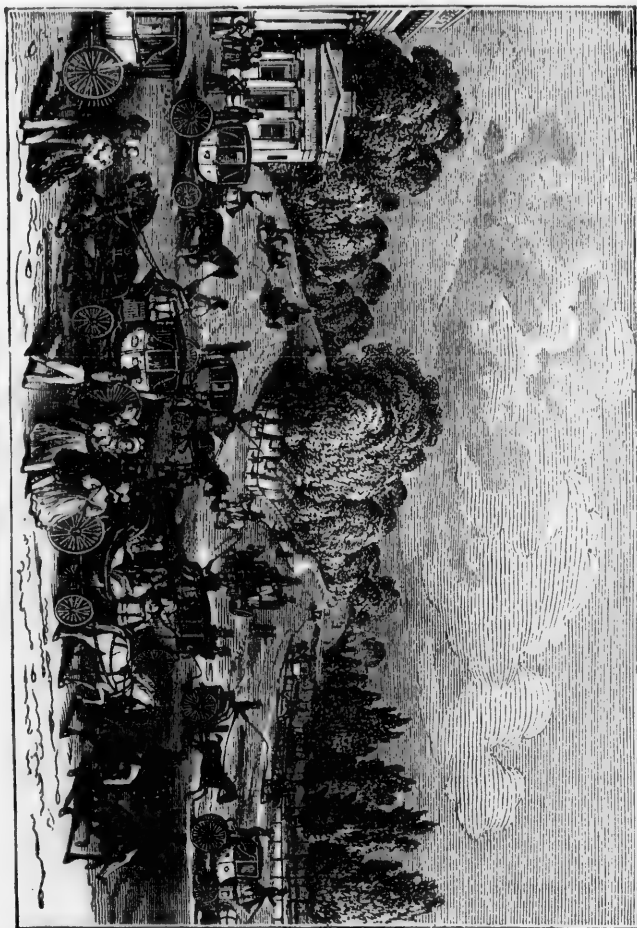
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Hyde Park—Entrance from Piccadilly.



exceptions the prevailing livery of the earth—something which is pleasing and refreshing for the eye to look upon, without being too glaring or dazzling.

Vegetables, though they do not possess the structure and sensations of living animals, have yet a kind of life of which mere matter is altogether destitute. They form a link, and a most important one, between mineral substances, such as rocks and stones, and animated beings. But though they are thus endowed with a kind of vitality, yet, as to actual composition, they are, like all animals, not excepting man himself, literally formed out of the "dust of the earth."

A few simple substances, such as carbon, sulphur, phosphorus, potash, soda, lime, magnesia, combined with three gaseous bodies, oxygen, nitrogen, and hydrogen, make up the whole of the matter of which plants are composed. Now, exactly the same substances combine to form the flesh and bones of animals; but as animals can not extract and combine these substances directly from the air, water, and soil, they have to depend either directly or indirectly on vegetables for their nourishment. No animal, even the simplest or most minute or insignificant, can live on inorganic matter. A great proportion of quadrupeds derive their sole support from grasses and green herbs, and many kinds of birds from grain and seeds; these become the prey of carnivorous animals, and afford them their sole means of subsistence. Fishes prey upon flies and insects, which either directly or indirectly derive their subsistence from the vegetable kingdom; and man, as well as some other animals, lives indiscriminately both on animal and vegetable matter. We thus find that vegetables perform a most important office in creation. By their peculiar structure and functions, and under the laws of vital action, they assimilate air, water, and earthy salts, and form out of them the matters called gluten, starch, sugar, and oils, which become the food of animals.

It is to the operations of vegetables, too, that we owe a considerable proportion of the soil which covers the earth. If we examine the rocks and stones around us, we shall find their surfaces covered

with circular patches of gray and yellowish lichens. These are simple plants, the minute seeds of which, wafted by the winds, fall on the rocks, and adhere to them by means of a glutinous matter on the lower sides of the seed. Attracting moisture from the air, they germinate, increase, and then moulder to decay. Their remains, mingling with the mouldering rocks beneath, in time accumulate a certain depth of soil, which still goes on increasing, till at last it becomes a deep bed fit for receiving and nourishing other species of plants that may be driven toward it by the agency of the winds, of birds, or other means which nature employs for the diffusion of vegetables. In this manner have our deepest and most fertile soils derived their origin. We find also vast accumulations of decayed plants making up peat mosses—and vegetables of a still more remote growth treasured up in the bowels of the earth in the form of that most valuable mineral, coal.

In common language, we speak of plants as living, as growing or increasing, and as fading and dying. Now, this is strictly correct. A plant is an organized structure, having numerous minute cells and porous tubes through which a sap or juice flows, and by which all the functions are performed, tending to increase, preserve, or multiply the species. It is possessed of what has been called irritability, which in many respects resembles some of the motions of animals, as is exemplified in the shrinking of the sensitive plant when touched by the hand, the movements of the leaves of plants toward the light, and the twining of their tendrils round other neighboring substances for support. But plants have not sensation. They do not feel like animals, nor exhibit any traces of consciousness. In short, they possess only that lowest form of vitality which has been called organic life.

Plants vary greatly in their structure, but the generality have roots, stems, branches, leaves, blossoms, and receptacles for the maturation of the seeds. Permeating the roots and stem, there are a series of minute hollow tubes and spiral vessels through which the sap passes upward from the earth, and, mounting to the leaves, there combines with the gases of

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the atmosphere, and thus becomes converted into a nutritious juice, which again descends, and is distributed throughout every part of the plant for its growth and nourishment. The outer bark of the plant consists of a thin membrane, somewhat like the skin of animals, and serves a similar purpose, to protect the parts beneath from the air and from external injury; serving also for the exhalation and absorption of moisture through its numerous pores. Immediately under the skin is a soft pulpy structure, consisting of innumerable cells, and which is of a green color in almost all vegetables. Of this kind of structure, too, the leaves of plants are composed. Under this cellular substance, we find in woody plants the true bark or *liber*, composed of numerous fibres running in a longitudinal direction, and having the appearance, when slightly macerated, of a fine net-work. In this portion of the bark the peculiar virtues of plants principally are found; such as gums, resins, essential oils, as cinnamon, peppermint, turpentine, and the astringent tannin of the oak. The wood is found immediately under this, circle within circle, extending to the pith, which is situated in the centre. The outer circle of wood next the bark is softer and juicier than those in the centre, being the newest; and as a circle is formed each year, the number in a transverse section, near the root, will commonly denote the age of the tree, at least all those trees of temperate regions. Throughout the woody fibres, but especially the outer circles, there are numerous tubes and cells, generally six-sided, through which sap and air freely flow. The leaves of plants are most important appendages, and may be compared to the lungs of animals. Plants will not live if deprived of their leaves, or if they have not free access to the sun and air. During the day, and in sunshine, the leaves of plants continually absorb the carbonic acid and nitrogen gases of the atmosphere, which enter into union with their juices, while oxygen gas is as constantly exhaled. In the darkness of night this process ceases, and a portion of the carbonic acid of their juices is thrown off. Now, this daily action of plants is just reverse of the breathing process of animals—the latter

consume the oxygen of the atmosphere, and give out carbonic acid, so that in process of time the air we breathe would become vitiated, were its oxygen not continually renewed by the operations of the vegetable kingdom. Here then we perceive another providential adjustment: not only do plants contribute food for animals, but they are also the great regenerators of the atmosphere, the purity of which is equally subservient to animal existence.

But there remains another feature of plants to be noticed—the flowers or blossoms, those variously tinted portions which add such beauty and splendor to the face of nature. We can not in the summer season turn our eyes in any direction, where we do not find the trees, hedges, and fields, loaded with gorgeous ornaments, from which proceeds also a mingled odor of delightful sweets. Even the meanest weed beneath our feet shows its little white star, or yellow, red, or variously spotted gem of blossom. Nature is not only bountiful in bestowing the useful and necessary, but profuse in pouring forth beauties to please and gratify the senses. Nature, however, is not profuse in vain—each of those brilliant cups and curiously tinted fibrils has its decided use; and all the parts combine to carry out the great conservative plans of creation. Like animals, plants are possessed of organs necessary to accomplish the purpose of nature—the reproduction and continuation of the species. From remote antiquity, the importance of the organs of the flower in perfecting the seed was known; and although Linnæus did not wholly make this discovery, yet it is to him we owe its complete elucidation about the year 1730. If we take a common wild rose, we may readily perceive the several parts of this structure. The green bulb attached to the flower stem is the *ovary*, where the seeds are matured. Above this is a green cup or *calyx*, notched into segments, and which serves to support the parts of the flower above. The flesh-colored leaves form the *corolla*, an undivided body in some plants, but in this, as in many others, divided into numerous *petals*; this corolla, which is generally the showiest part of all flowers, serves as a protection and de-

fence of the parts within. These consist of the *pistil* or female flower in the centre, and of the *stamens* or male flowers ranged around the circumference. The stamens carry on their tops an oblong loosely attached body, which is the *anther*, containing the *pollen* or fertilizing dust, which in due time bursts and scatters its contents on the *stigma* of the pistil. In some plants, the blossom contains only the pistils or female flowers, while the stamens grow on other plants, or on separate twigs of the same plant. In such instances, the pollen is borne along by the agency of the wind, or of the bee or other insects, roaming from flower to flower in search of food.

Such is a rapid glance of the arrangements of nature in even the lowliest plants. From the simple moss or lichen up to the tall cedar or the splendid magnolia, there are of course many diversities of this structure—but all are on one uniform plan, and every plant produces its “seed after its kind.” What a field here for the exercise of the attention, and for exciting pleasing and wonderful thoughts of that Being “who in wisdom has contrived the whole!” When the celebrated traveller, Mungo Park, found himself alone in the barren wilds of Africa, robbed, maltreated, and then deserted by cruel and savage robbers, he sat for some time gazing around him with amazement and terror at his utter abandonment. “Whichever way I turned,” he touchingly relates, “nothing appeared but danger and difficulty. I saw myself in a vast wilderness, and five hundred miles from any European settlement. At this moment, painful as my reflections were, the extraordinary beauty of a small moss in fructification irresistibly caught my eye. Can that Being, thought I, who planted, watered, and brought to perfection in this obscure part of the world a thing which appears of so small importance, look with unconcern upon the situation of creatures formed after his own image? Surely not! Reflections like these could not allow me to despair. I started up, and, disregarding both hunger and fatigue, travelled forward, assured that relief was at hand—and I was not disappointed.”

It was an old opinion, and one which is not quite eradicated even at this day,

that the earth, when dug up in any place, will spontaneously produce plants without seed. Nothing, however, can be more fallacious. It is true, the whole face of nature teems with seeds of plants that come floating on the air, and are borne about and scattered by birds and animals and other means; but in situations where no transmission of this kind can occur, experiment has proved that there will be no vegetation, and that every plant must proceed from some seed or graft, or root of a parent plant. Malpighi procured a quantity of earth dug from a great depth, and enclosed it in a glass vessel, whose mouth was covered over with several folds of silk, so as to admit air and water, but to exclude all such seeds as might come from without; the result was, that no plant grew from this earth. Mr. Keith performed a similar experiment. On 15th April, 1811, he procured a quantity of black clay taken from the depth of 100 feet, and exposed it to the action of the air and weather. It was placed upon a slate in one of the quarters of his garden. On the 15th of May, he placed upon another slate a similar quantity of earth taken from the depth of 150 feet, under a hand-glass, which was only removed to give the earth an occasional watering. No symptoms of vegetation appeared in either the one or the other till the 3d of September following, when several plants were found springing from the surface of the exposed clay, and one also from the surface of the insulated clay. The former proved to be plants of the common ground-sel, which was then coming up from seed over all the garden, and hence easily accounted for; the latter was a plant of *ranunculus sceleratus*, the seed of which, he says, was undoubtedly brought to the clay along with the water it was watered with, which was procured from a neighboring pond, around the edges of which the plant grew in profusion.

The various methods which nature employs to disperse the different varieties of seeds over the earth are truly wonderful. Many plants, when the seed is fully ripe, discharge it from the seed-cover or *pericarp* with a jerk or elastic spring. The common oat is thrown out in this way; and the loud crackling of the pods of the broad

in a dry sunshiny day, which is caused by their bursting and scattering about the contained seeds, must have been frequently noticed. The cones of fir-trees remain on the tree till the summer succeeding that on which they grow; when the hot weather commences, the scales of which they are composed burst open, and the seeds are scattered to a considerable distance. Then, there are the downy appendages which buoy up the smaller seeds, as the thistle and dandelion, carrying them through the air to great distances—the currents of rivers, floating down seeds from one district to another—and even the tides and currents of the ocean, which bear along the germs of vegetation from separate regions of the globe. Birds, too, by feeding on particular seeds, carry them to great distances, where being often voided entire, they vegetate. This is particularly the case with stone fruits, as cherries and plums.

The seed of a plant, as the common bean, consists of the outer skin or covering, within which is contained a starchy substance divided into two halves, called *cotyledons*. At the place where these two join, just opposite to the outer eye or black spot of the bean, is situated the germ or rudiment of the future plant. When the bean is put into the earth and subjected for a few days to heat, moisture, and air, it begins to germinate. The starch of the cotyledon is converted into sugar, and affords a nutritious juice for the sustenance of the germ, till this latter is old enough to push out roots into the soil and provide for itself. The cotyledons thus resemble the white and yolk of a bird's egg, or the milk supplied by a mammiferous animal. The springing germ consists of two parts—the rootlet, which invariably takes a downward course into the earth, and the leaf-bud, which as invariably aspires upward. This is an admirable provision in nature; for in whatever position a seed may fall into the soil, the leaf always reaches the surface, and thus is preserved, and vegetates; whereas, had it not received this final determination, it might have remained in the soil and rotted.

Some seeds have only one cotyledon, as the common one, while the germinating buds or *sporules* of the inferior class of

vegetables can not be said to possess a true cotyledon at all.

Besides propagation by seeds, many plants may be raised from slips or cuttings, roots, and buds, taken from a parent plant and placed in the soil. The reproductive power of most plants is generally very great. Some, it is true, produce only one, two, or three seeds, but others again an inconceivable number. A single capsule of tobacco often contains a thousand seeds. The head of the white poppy has produced eight thousand; and the capsule of the vanilla from ten to fifteen thousand. A plant of elecampane will produce altogether three thousand seeds; and a plant of the great cat's tail ten thousand; while a single stalk of spleenwort produces a million.

GATHERING OLIVES.



THE method of gathering the olive varies in different parts of the Peninsula. The most general way in Portugal, however, is to beat them down with long poles, and afterward collect them in sacks, or baskets. Both the oil and the fruit are inferior by this method, as the fall bruises the produce too much. The Spaniards gather them all by hand, and though the process is more laborious and more expensive, ample compensation is made in the superiority of these olives over those beaten down by poles. When intended for food they are prepared in two ways: one is simply to cut them and soak them in salt and water, adding a few herbs to give a flavor; the other is first to dry them in the sun, whereby they become black, and afterward to put them in jars, with oil, salt, pepper, or other spices, adding also a few herbs. When eaten by the natives, they are invariably flavored with oil and a little vinegar. With us, olives are used only at the tables of the weakly as a luxury—disagreeable enough to those who are unaccustomed to their flavor; but in the countries of their growth they are



Gathering Olives

essential articles of food. The shepherd takes nothing with him to the field but a little bread, a flask of wine, and a horn of olives; the carretiero, or carman, carries with him only his wineskin, his loaf, and olives; and the laborer in the field, and the peasant in his cottage, often have nothing more till nightfall: indeed bread and olives form an extremely nutritive and refreshing diet.

The olive-tree is extremely picturesque and grotesque in its form; the trunk sometimes consisting of a huge mass of decayed wood, with young and graceful branches springing from the top and sides; at other times a large and bushy tree may be seen supported upon two or more small fragments of the same apparently dead wood, while the remainder of the trunk is completely hollowed out. The wood burns readily when green, and the leaves emit a strong sparkling flame, and apparently contain much oil. The ground between the olive-trees is not lost, being frequently sown with grain, and sometimes, though rarely, planted with vines. The deep color of the foliage of this most useful tree gives a solemn character to the landscape, and subdues the usual vivid brilliancy of color—the effect of the clearness of the atmosphere and the heat of the climate. Green, such as adorns our own meadows, is a color never seen in a Portuguese landscape: the scanty herbage, which springs up spontaneously, is burned by the sun into a bright straw color; and the soil, through the great heat, becomes almost white. On the sides of the hills, however, the beautiful pale purple flower of the wild thyme, and the delicate gray of its leaf, contrast prettily with the surrounding glare; and it is only the olive with its deep hues and the low bushy vines which can claim the name of green. The cultivation of the orange and the lemon is confined chiefly to the neighborhood of large cities, very few groves of these fruits being met with in the open country.

The manner of rearing the vine is somewhat peculiar in the Peninsula. While in Italy, and in some parts of France, the vine gracefully curls around the poles placed in the earth for their support, and the rich fruit hangs in large bunches from

every branch; in the Peninsula, the vine is cut down almost to the ground, and in winter has much the appearance of a withered and blackened stump. With spring, however, the branches shoot out in every direction till they attain the size of a currant-bush, which, indeed, they very much resemble. Only a few of these branches are suffered to remain, and those which are left are cut at the end to prevent them running into useless wood: the vine thus trimmed produces from eight to a dozen bunches; but these are of a superior flavor, and make the best wines. When the grapes are gathered, which is done with great care, and mostly by women, the inferior bunches are suffered to remain for a day or two, when they also are gathered, and manufactured into a wine of lower quality, or hung up to dry for winter consumption.

PLEASURE AFTER PAIN.



WE greatly admire the sentiment which the poet Dryden expresses in one of his most celebrated odes, "Sweet is pleasure after pain." We have often experienced its truth,

and are quite in love with the paradox, that our miseries both multiply and heighten our enjoyments. The Creator, undoubtedly, could have prevented the entrance of evil, both physical and moral, into our world. We can easily imagine a condition of things from which pain, in all its shapes, should have been excluded. We can fancy a state fair and smiling, as we believe Eden to have been—its beauty without one marring speck, its happiness without a single particle of alloy. We can realize, in thought at least, that golden age about which the poets have sung so sweetly, and on which the mind loves to linger. But in such a scene there must have been wanting one very exquisite kind of pleasure—"the pleasure after pain;" the inhabitants of such a world

must have been deprived of a species of joy as high in its tone, perhaps, as any we taste. There might, in such a system of things, have been much worthy of its author, and reflective of his glory. The powers of nature might have produced as astonishing results as they do at present, and have been balanced with as exquisite skill. The stars might have shone in a firmament as deep and blue as that in whose bosom they now burn. The planets might have woven their mycæic dance round a sun as vast and lustrous as that they circle now. The clouds might have been clothed in as rich a purple. The flowers might have yielded as delicious a perfume. The mountains might have reared their heads as majestically on high, the brooks prattled as merrily, and the rivers rolled as grandly to the sea. The seasons might have performed their wonted rounds; the shower and the sunshine combined their fructifying energies, and trees and herbs clothed the face of the earth. There might also have been creatures to partake of what was thus liberally provided; and earth, and air, and water, have teemed with sentient existences. There might, too, have been—the crown and ornament of the whole—a being gifted with reason and affection, capable of admiring the beauty such a system would present, and tracing the wisdom from which it sprang; qualified not only to enjoy the good, but to love and adore the Giver. This in truth—the absence of evil supposed—is but our notion of primeval paradise. In such a world, however, there would, as we have said, have been wanting that very exquisite kind of delight derived from the remembrance of pain! The power of contrast comes to our aid in the creation of this joy; contrast, indeed, is the principal element of the happiness we are speaking of. The classical reader will promptly recall the use which the hero of the *Æneid* made of the “pleasure after pain” principle, when he was beset with hardships and dangers. He revived his own spirit, and he cheered the drooping spirits of his companions, by adverting to the future, and intimating the probability, that the time might come when the recollection of what they were then enduring would prove

a source of enjoyment. “Perhaps,” exclaimed the son of the venerable Anchises, “it will one day yield us delight to remember these sufferings.”

We detect in the kingdom of nature emblems of the principle in question; as, indeed, all great and lovely principles have their adumbrations in nature. Earth, with its grand and beautiful scenes, was educed from an unshapely mass, “without form and void.” The gold which glitters most lustrously is that which the fire has tortured into purity. There is no calm so tranquil as that which succeeds the hurricane; no sunshine so bright and gladdening as that which breaks on the earth through an April shower. Were it not for the power of variety and contrast, what joy should we have from the most delicious of the seasons? Do not the bleakness and dreariness of winter lend a charm to the beauties of the spring and the glories of summer? And do we not detect in these, and numerous other instances, the operation and the type of the sentiment we profess so warmly to admire—“sweet is pleasure after pain”?

The power of the law of contrast is indeed remarkable. We know, for example, that a sweet and lovely scene never looks so attractive as when placed side by side with one which is rugged and grand; that never does a cottage home, with its blooming garden and patch of verdure around it, seem so bewitching an object as when situated at the base of some towering Alpine summit. Beauty reposing on the lap of grandeur, is an idea with which every enthusiastic admirer of fine scenery is familiar. Painters know this principle well, and in selecting subjects for their sketches, they are fond of such a combination of the beautiful and sublime as that in question. Again, in delineating character, poets and novelists avail themselves of this same law to heighten the effect of their descriptions. We have placed side by side the gentle and the stern, the timid and the brave, the intriguing and the open, the selfish and the generous: opposite qualities, in short, are placed in vivid contrast with one another, so that, just as the cottage home we have supposed looks all the more charming that it reposes at the foot of the

gloomy Alpine precipice, the attributes of virtue wear all the more enticing aspect when seen in immediate contrast with those of vice.

Now, it is this law that comes into operation when the remembrance of former sorrows and hardships comes to heighten present joys. We look back on the past. We remember its struggles. We think of the difficulties and dangers we had to contend with, and which, happily, we have now surmounted. We contrast our present with our past condition—the bright with the gloom—and the contrast is delightful. Indeed, our joy is comparatively a tame thing apart from this retrospect. The recollection of pain lends a peculiar zest to pleasure. Health is relished far more keenly by those who have just recovered, than by those who have never lost it. The rest of the laboring man is sweetened by the remembrance of his toils. The shore is made a thousandfold dearer to the mariner when he recalls the rude buffetings of the ocean. There is much of the human heart in the lines, we know not whose they are:—

"I envy not the dame, whose lord
Was never forced to roam,
She never knew the boundless joy
Of such a welcome home!"

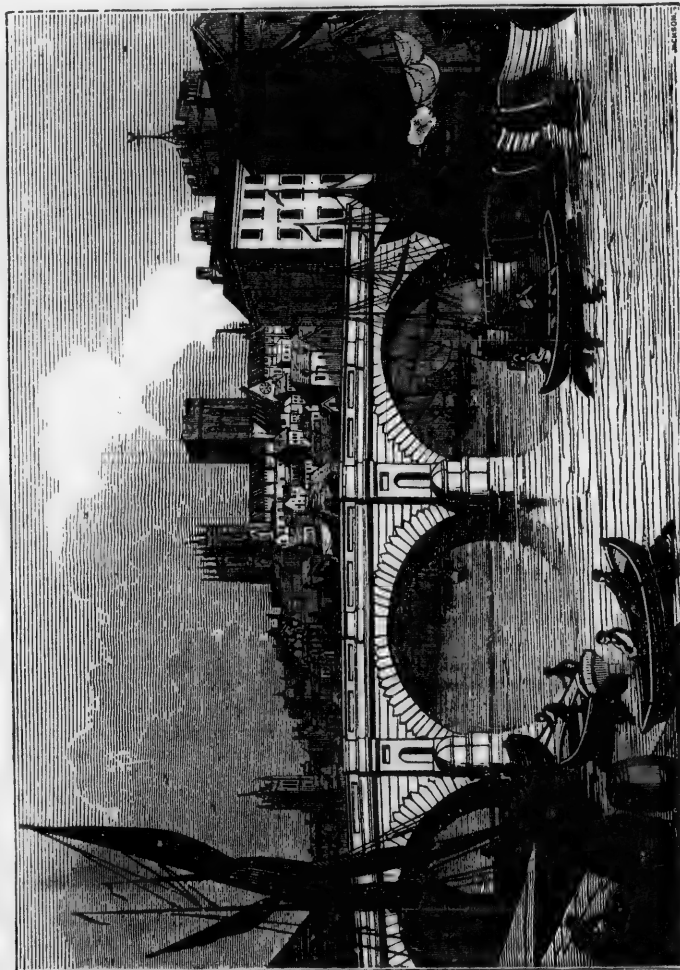
They who never knew the agony of one of those partings, which Byron says "press the life from out young hearts," can never know the real joy of meeting again. Every moment of anxious expectation—every tear rushing to the eye—every sob bursting from the bosom—is silently laying up an accession to the ecstasy of the hour when those sobs shall all be stilled, and those tears kissed away. They, if in this vale of tears there be any such, whose attachment is never put to such a test, and whose hearts are never visited by such a pang, can not realize a happiness worthy of being named with that which has come bright from the furnace of anxiety and anguish. To be relieved from a state of racking suspense—to vanquish a difficulty we dared not hope we should ever be able to overcome—to be rescued from the pressure of want, or relieved from acute bodily pain—to be reconciled to one dearly loved and with whom we had quarrelled—these, and such as these,

whenever experienced, bring illustrations of the truth of the maxim we have been considering: "sweet is pleasure after pain." And, in connexion with higher motives to submission when we are suffering, this may help to console and encourage us, that to look back on past trials will one day be the means of heightening our joys. This thought, too, should go far to reconcile us to our present condition, and induce us to seek with ardor that purer and nobler state after which we aspire. It can not, indeed, be doubted that the recollection of the past will be one main element in future blessedness. The toils and trials of our pilgrimage will help to deepen our ecstasy when we have reached that abode where there is no pain.

THE CITY OF YORK.



IN the Roman times, York may be said to have been, more than London, the capital of England. The Roman emperors who visited the country for the most part took up their residence at York. Here the emperor Severus died in the year 211, after having made York his headquarters during the three or four preceding years which he spent in the island. Three remarkable mounds, a little west from the city, still bear the name of the hills of Severus: and many other remains that have been discovered in later ages attest the Roman domination. After the establishment of the Saxon heptarchy, York became the capital of the kingdom of Northumberland. Although, on the arrival of the Normans, this district, like the rest of the kingdom, quietly submitted in the first instance to the invaders, it was the scene on which, soon afterward, a struggle was made by a powerful confederacy of Saxon lords and their retainers to regain their independence. This insurrection, however, was soon crushed by the activity and energy of the conqueror, who, laying siege to York, starved it into



View of the City of York.

a surrender in six months, and then, after his usual fashion, erected a fortress in the close neighborhood of the town, to keep it for the future in awe. This was the origin of the present castle, situated at the southern extremity of the city, in the angle formed by the confluence of the two rivers. At a little distance is a ruin called Clifford's Tower, which was the keep of the old castle, and took its name from the Cliffords, whom William appointed the first governors of that stronghold. In early times parliaments were frequently held at York; and in 1299, Edward I., even removed the courts of law from London to this city, where they continued to sit for seven years.

The city of York stands in the midst of an extensive plain, the largest certainly in Great Britain, if not, as has been sometimes asserted, in Europe. Viewed from the immediate neighborhood, the peculiarity which most strikes the eye is the ancient wall by which it is encompassed—supposed to have been built by Edward I., about 1280, on the line of the old Roman fortification. This wall, which had fallen greatly into decay, never having recovered from the damage it sustained when the city was besieged by Sir Thomas Fairfax and General Lesley, in 1644, has been lately repaired, and a walk is now formed along the top of part of it, which is a favorite resort of the inhabitants.

Seen from a greater distance, York presents a crowd of pointed spires shooting up from the midst of the houses, the indications of those numerous parish churches of which it still retains twenty-three out of forty-two which it formerly possessed. Far above all these, however, rise the enormous bulk and lofty towers of the Minster, which stands in the north part of the city, and to the east of the river. In the opposite quarter is the castle, a large building, erected about the beginning of the last century, on the site of the Conqueror's Fortress, and serving as a prison for criminals and debtors. Besides the county prison are the county hall, the courts of Assize, and other public buildings.

The entire circuit of the walls of York is about three miles and three quarters, being somewhat less than that of the walls

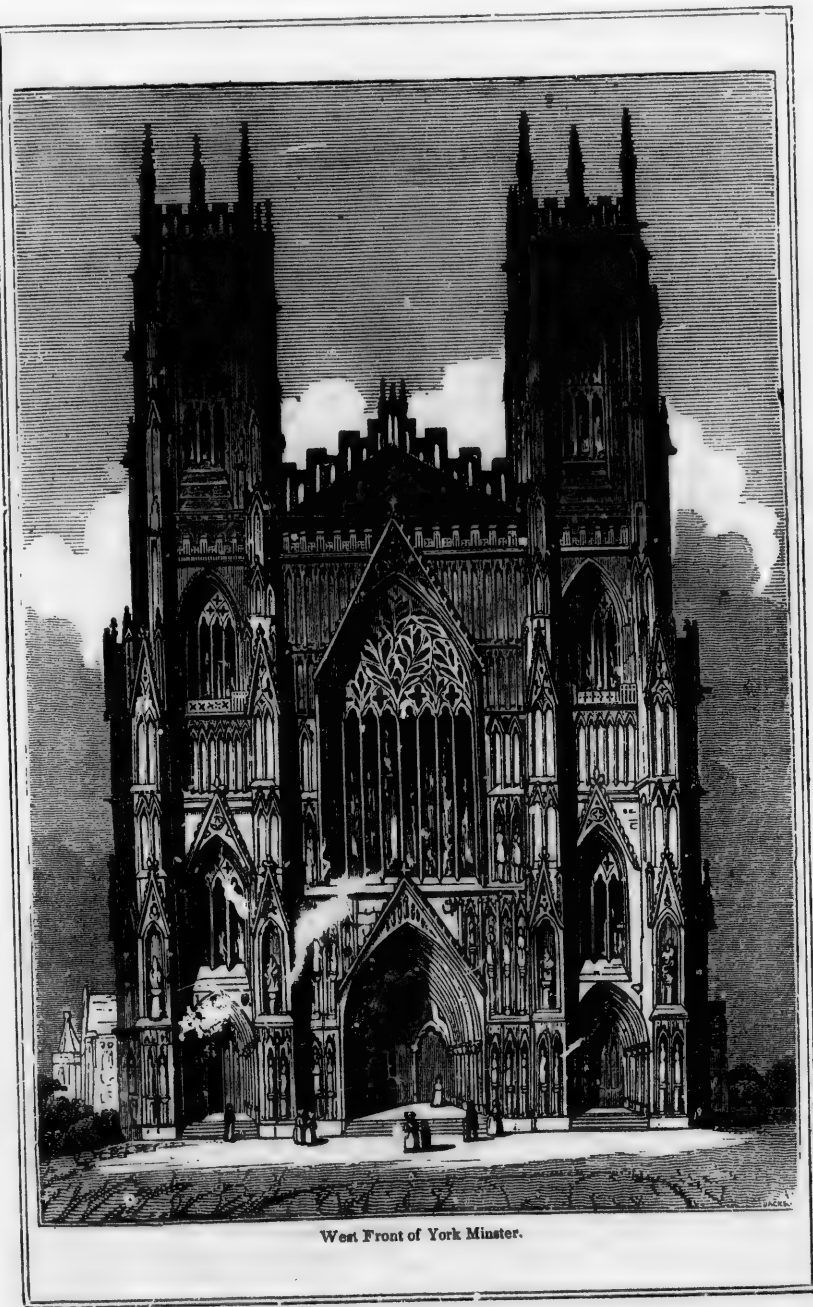
of the city of London. The space within, however, is much less densely occupied by streets and houses than it is in London.

In a description of York, its ancient gates ought not to be forgotten. They are four in number, namely, Micklegate bar to the southwest, over the entry from London; Walmgate bar to the southeast, Monk bar to the northeast, and Bootham bar to the northwest, facing the great road from Scotland. All these structures are at least as old as the thirteenth century; and the inner arch of the Micklegate bar, which is a portion of a circle, has been supposed to be of the Roman times.

The chief glory of this city, however, is the noble cathedral, of York Minster. The term *Minster*, is a corruption of the Latin *Monasterium*, a house tenanted by monks, or what we still call a monastery. Minster, however, is now generally used to designate a cathedral church, to which it was no doubt originally applied with a reference to the retinue of religious persons forming the chapter of each of these establishments, and giving it the appearance of a monastic community.

Among buildings in what is called the Gothic style, York Minster has generally been regarded as without a rival in England, or perhaps in Europe. The establishment of the present see of York dates from a considerably more recent era. Augustine, the apostle of the English, arrived in the isle of Thanet, which formed part of the kingdom of Kent, in the year 597. He was soon after consecrated archbishop of Canterbury, and according to the generally-received account, died in 605. Kent, however, was as yet, and for some time after, the only portion of the island into which the light of the gospel had penetrated. Pope Gregory, indeed, by whom Augustine and his companions had been deputed, had commanded that an archbishop should be established at York, to exercise the same jurisdiction over the northern parts of the country as Augustine was authorized to exercise over the south. But it was not till the year 624 that any attempt even seems to have been made to introduce Christianity into the northern district.

This magnificent pile was in part erected by several successive archbishops.



West Front of York Minster.

The whole was probably finished, and the Minster brought to the state in which we now see it, about 1410 or 1412.

It is perhaps the most perfect example to be anywhere found of the history and progress of the Gothic style during the period of not much less than two centuries, which its construction occupied. In this place we can only remark generally, that a continued and regular improvement in grace and lightness of form, and a more and more lavish profusion of minute and elaborate ornament, will be found to form the leading characteristics of that progress in England, during the whole of the period in question.

York Minster, is built in the form of a cross, the longer bar, forming the choir and nave of the church, lying, as usual, east and west, and the shorter, called the transept, north and south. Over the centre of the building, supported on four massive pillars, rises a grand tower to the height of 213 feet from the floor. This is said to be only a portion of the altitude originally designed by the architect, who intended to surmount this stone erection by a steeple of wood covered with lead, had he not been deterred by a fear lest the foundation should prove insufficient to sustain so great a weight. Over the west end of the building are two other towers or steeples rising to the height of 196 feet. The whole length of the building from east to west is 524½ feet, and that of the transept, from north to south, 222. The length of the choir is 157½ feet, and its breadth 46½; in addition to which the east end of the choir contains a chapel behind the altar dedicated to the Virgin, making an entire length of 222 feet. The length of the nave is 261 feet; its breadth (including the aisles), 109; and its height, 99.

York Minster has not the advantage of standing upon a height; yet its enormous mass makes it a conspicuous object from a great distance, and nothing can be grander or more imposing than the aspect which its lofty buttresses and gray towers present as they are seen rising over the surrounding houses of the city, which look like the structures of a more pigmy generation beneath the gigantic and venerable pile. For the present the grandeur of the Minster must be sought for principally in

its interior. The effect of the whole prolonged and lofty extent, as seen on entering from the great west door, is perhaps as sublime as any ever produced by architecture. Under favorable circumstances, such as the rich illumination of a setting sun, the impressions of awe, and veneration, and we may add, delight, produced upon the mind by the grandeur and beauty of this wonderful building, are perhaps superior in intensity to the effects of any other work of man's hands. We doubt whether the finest Grecian temple could ever so touch the hidden springs of enthusiasm in our nature. The choir is divided from the nave by a stone screen; but this ornamental partition is so low as not to intercept the view of the portion of the roof beyond, nor "the dim religious light" streaming from the magnificent "storied window" that fills the east end of the building. The screen and the great east window are two of the proudest ornaments of the cathedral. The former is a work in the very richest style of ornamental carving; and fortunately it is in almost perfect preservation. It is divided into compartments by fifteen inches, which contain the statues of the English kings from the conqueror to Henry VI. inclusive. The great east window is of the vast dimensions of 75 feet in height by 32 in breadth. It is formed of above 200 compartments of painted glass. The fabrication of this noble specimen of art was begun in 1405, by John Thornton, of Coventry, whose agreement was to complete it in three years, during which time he was to have a salary of four shillings a week, with 100 shillings additional per annum, and 10l. more on finishing the work, if it should be done to the satisfaction of his employers.

Attached to the northern transept of the cathedral is the Chapter house, an octagonal building, with a conical roof, the interior of which consists of one apartment of great magnificence. It is 63 feet in diameter and 67 feet 10 inches in height, the arched roof being supported without pillars. Around are arranged the stalls, forty-four in number, formed of the finest marble, and having their canopies sustained by slender columns. A window occupies each of the eight sides,



Interior of the Choir of York Minster.

except that in which is the entry from the transept.

York Minster contains a good many tombs, some of them of considerable beauty; but these we can not here attempt to describe. Among the curiosities preserved in the vestry we can notice only the ancient chair, said to have been used at the coronation of some of the Saxon kings, and on which the archbishop is still on certain occasions accustomed to seat himself; and the famous horn of Ulphus, one of the most curious relics of Saxon antiquity which have been preserved to our times.

York Minster was very nearly destroyed in 1829, by the act of an insane individual, Jonathan Martin, who, having concealed himself in the choir after service the preceding evening, contrived to kindle a fire in that part of the building, which was not discovered till seven o'clock in the morning. By this time the wood-work of the choir was everywhere in a blaze; but by great exertions, and especially by sawing through the beams of the roof, and allowing it to fall upon the flames below, the conflagration was in a few hours subdued. The damage done consisted in the entire destruction of the stalls of the choir and of the 222 feet of roof by which that part of the building was covered. The organ over the screen was also destroyed, but the screen itself escaped uninjured. A public subscription was immediately commenced for the repair of a loss which was justly considered a national one, and the sum of £50,000 was collected within two months. The task of effecting the restoration was committed to Mr. Smirke; and the work was admirably completed in the spring of 1832. The scrupulous care with which the restoration of York Minster has been accomplished, so as to preserve every detail of the building, is highly creditable to the architect and his employers. The roof has been executed in teak, and the carved work of the choir in oak. With the exception that the choir looks cleaner and fresher than formerly, a person unacquainted with its destruction would be unable to perceive any change. The organ, in York Minster, was one of the finest in Europe.

THE WORLD.



THE complete revolution in the condition of the world, during the past century, which its commercial transactions indicate, has been effected by the inventions of genius, and not by the operations of arms. The agents, by whose instrumentality this result has been accomplished, have in the main, sprung up where they were little expected to arise. The United States, scarcely free from the evils consequent upon a long and bloody struggle for their independence, began to manifest that depth of research and enterprise of action, which elevated their ancestry to the empire of Europe. In rapid succession, men came into notice then, who were resolved to improve upon the inventions of the past. Applying to the most useful purposes the quadrant, which their countryman, Godfrey, had years before constructed, and availing themselves of the advantages consequent upon a knowledge of the nature and application of electricity, which had been fully established by the incomparable Franklin, they went on to erect a vast system of practical science, upon which schemes of the most extensive benefit to the human race have been perfected. Fulton, in the latter part of last century, conceived the bold idea of propelling vessels by steam-power, against the most rapid currents, which although tried before in England, had proved a failure. Confident of eventual success, this fearless philosopher, notwithstanding he was pronounced a visionary in Europe and America, entered upon a train of experiments, which finally placed commerce upon the basis which it now occupies.

Learning, it is true, received a temporary shock from the revolutionary movements which characterized the early portion of the present century. In England, Scotland, the United States, and France, its progress, however, has been in advance of previous ages. England and Scotland substantiate the position, by the attainments of Herschel, Lardner, Brewster, and Arrott, in astronomy, optics, and math-

emathics; of Whewell, Mills, McCauley, Dimond, Brougham, Wakely, and De Lolme, in ethics and politics; of Cooper and Carpenter, in physics; of Byron, Rogers, Moore, Campbell, Scott, and Montgomery, in poetry; of Dickens in descriptive composition; of Sheridan, Bulwer, and Jerrold, in dramatic works; and of Macready in tragic performances.

The United States demonstrates the same truth, in being able to enumerate among her citizens the names of Davies, Bowditch, Adrian, and Gummere, as mathematicians; of Franklin, Godfrey, Rush, Fulton, Hare, Day, and Silliman, in natural philosophy; of Jay, Story, Marshall, and Kent, as jurists; of Wayland, Vethake, Channing, Upham, Sparks, Jarvis, Wilson, and Potter, as political and moral writers; of Dwight, Barlow, Longfellow, Bryant, Willis, Whittier, and Halleck, as poets; of Forrest, Murdock, Scott, Booth, and Charlotte Cushman, in the drama; of Payne, Conrad, Stone, and Bird, as tragic composers; of Irving, Cooper, and Neal, as novelists; of Bancroft, Miner, and Prescott, as historians; and of West, Alston, and Sully, as artists.

France also attests the same fact, by the researches of Esquiroll, Arago, and Guizot, in the natural sciences; and by the works of Thiers, Dumas, Sue, Bernard, Fevel, and Scribe, in polite and elegant literature.

The greatest impulse has been given to the advance of the arts and the improvement of the age, by the liberal and fostering course of policy pursued by Louis Philippe in relation to inventions, and in the cases of learned men; such a course, in fact, as must to all ages rank that monarch among the greatest patrons of science that Europe has ever produced.

Germany still maintains the elevated position as a scientific nation, which she has held for ages, and by the works of Von Savigny and Gans, Raumer and Rotteck, Grabbe and Brentano, Heine and Pichler, Muller and Wurm, has greatly contributed to the common stock of the republic of letters; while Italy and the northern powers, though politically checked and severed by the interposition of her Austrian and Prussian influences, cultivate a literature in common with her, in all its

departments. Though it must be confessed that among all these nations there is a greater desire to imitate the English standards than to elevate their own, which has the sanction of the past in its recommendation. The long and devastating civil wars which have raged throughout the peninsula of Europe, have produced their necessarily-retarding influences upon the cause of science, the progress and improvement of which this place had been previously hailed with great delight by its friends and patrons throughout Christendom.

The present century has been, and still continues to be, remarkably prolific in the means for the diffusion of useful knowledge. Institutions adapted to this end, have sprung up, both in Europe and America. Of this description are the associations for the founding of libraries designed to circulate among the masses of society; the publication of magazines upon a principle of cheapness, which ensures the possession of them by the humblest members of society; the dissemination of religious knowledge among the savage and pagan portions of our race, and for the establishment of those noiseless agents for good—the sabbath schools—which are now pervading every part of the world. In the protestant United States of America, the most efficient means have been taken in this great work, by the endowment, at public expense, of colleges and seminaries of learning, as well as by the adoption of the certain means of information, in the creation of public schools, in most of the states, supported by a direct tax upon the citizens, and an annual legislative appropriation. Some portions of the British possessions in North America have followed this noble example; and to a mind which has contemplated the increasing thirst for knowledge, and for years marked the course of the catholic republics of South America, as evinced by the large number of students, which flock thence to the colleges of the United States, the conviction that they will eventually adopt the same, at and certain means of perpetuating their freedom, contain nothing novel or at variance with the process of fair reasoning.

OCTOBER.



OCTOBER, so named from the two Latin words, *octo* and *imber*, although it is now the tenth month in our calendar, was formerly the eighth in the calendar of Romulus: by our Saxon ancestors called *Wyn-monat*, or wine month.

The great business of nature with respect to the vegetable creation at this season, is *dissemination*. Plants having gone through the progressive stages of springing, flowering, and seeding, have at length brought to maturity the rudiments of a future progeny, which are now to be committed to the fostering bosom of the earth. This being done, the parent vegetable, if of the *herbaceous* kind, either totally dies, or perishes as far as it rose above ground; if a tree or shrub, it loses all its tender parts which the spring and summer had put forth. Seeds are scattered by the hand of nature in various manners. The winds, which at this time arise, disperse far and wide many seeds which are curiously furnished with feathers or wings for this purpose. Hence plants with such seeds are, of all, the most universally to be met with; as dandelion, groundsel, ragwort, and thistles. Other seeds by the means of hooks, lay hold of passing animals, and are thus carried to distant places. The common burs are examples of this contrivance. Many are contained in berries, which being eaten by birds, the seeds are discharged again uninjured, and grow where they happen to fall. Thus carefully has nature provided for the distribution and propagation of plants.

The gloom of the falling year is in some measure enlivened, during this month especially, by the variety of colors, some lively and beautiful, put on by the fading leaves of trees and shrubs.

It is just at this point of time, when the trees and shrubs exhibit such a variety of tints, that landscape painters are particularly fond of exercising their art.

To these temporary colors are added the more durable ones of ripened berries,

a variety of which now enrich our fields and pastures. Among these are particularly distinguished the hip, the fruit of the wild rose; the haw, of the hawthorn; the blackberry, of the bramble; and the berries of the alder, holly, and woody nightshade, and of the spindle-tree, the last of a most beautiful color. These are a providential supply for the birds during the winter season; and it is said that they are most plentiful when the ensuing winter is to be most severe.

The common martin, whose nest, hung under the eaves of our houses, affords so agreeable a spectacle of parental fondness and assiduity, usually disappears in October. As this, though one of the smallest of the swallow-kind, stays the latest, its emigration to distant climates is less probable than that of the others. The sand-martin, which breeds in holes in the sandy banks of rivers, and about cliffs and quarries, most probably passes the winter in a torpid state in those holes.

The weather about this time is sometimes extremely misty, with a perfect calm. The ground is covered with spider's webs innumerable, crossing the path, and extended from one shrub to another. It is a frequent appearance in this season, and a certain indication of a fine and warm day.

Mr. White gives the following account of them, in his history of Selborne: "The remark that I shall make on these cobweb-like appearances, called gossamer, is, that strange and superstitious as the notions about them were formerly, nobody in these days doubts but they are the real production of small spiders, which swarm in the fields in fine weather in autumn, and have a power of shooting out webs from their tails, so as to render themselves buoyant and lighter than air. Every day in fine weather, in autumn chiefly, do I see those spiders shooting out their webs and mounting aloft; they will go off from your finger, if you will take them into your hand."

These webs are often formed into long white filaments, and may be seen floating in the air; to this appearance Shakspeare alludes:—

"A lover may bestride the gossamer
That idles in the wanton summer air,
And yet not fall, so light is vanity."

THE NEWFOUNDLAND DOG.



HIS powerful, intelligent, and docile animal, which in its unmixed state is certainly the noblest of the canine tribe, is a native of the country the name of which it bears, and may be considered as a distinct race. Its introduction into this country is of comparatively recent date; and the fine animal known to us by the name of Newfoundland dog is only half-bred, and of size inferior to the dog in its native state, when it measures about six feet and a half from the nose to the extremity of the tail, the length of which is two feet. In its own country it only barks when greatly irritated, and then with a manifestly painful effort, producing a sound which is described as particularly harsh. Its exemption from hydrophobia in Newfoundland appears to be well authenticated.

The dog is employed by the settlers as a beast of burthen in drawing wood from the interior to the coast. Three or four of them yoked to a sledge will draw two or three hundred weight of wood with great facility for several miles. In this service they are said to be so sagacious and willing as to need no driver or guide; but, having delivered their burden, return without delay to the woods in the expectation of receiving some food in recompense for their labor. From the activity of his disposition, the Newfoundland dog delights in being employed; and the pride of being useful makes him take uncommon pleasure in carrying in his mouth for miles baskets and other articles, of which, as well from that satisfaction as from the fidelity of his character, it would be dangerous for a stranger to dispute possession with him. In many respects he may be considered as a valuable substitute for the mastiff as a house-dog.

The Newfoundland dog is easily satisfied in his food. He is fond of fish, whether fresh or dried; and salt meat or fish is more acceptable to him than to most other animals, as well as boiled potatoes and cabbage. When hungry,

however, he has not very strong scruples about appropriating such flesh or fish as falls in his way, or even of destroying poultry or sheep. For the blood of the latter animal he has much appetite, and sucks it from the throat without feeding on the carcass.

It is well known that the Newfoundland dog can swim very fast, dive with ease, and bring things up from the bottom of the water. Other dogs can swim, but not so willingly, or so well. This superiority he owes to the structure of the foot, which is semi-webbed between the toes; thus presenting an extended surface to press away the water from behind, and then collapsing when it is drawn forward, previous to making the stroke. This property, joined to much courage, and a generous disposition, enables this dog to render those important services to the preservation of endangered life, of which such numerous instances are recorded, and of which our engraving affords an illustration.

A Newfoundland dog, kept at the ferry-house at Worcester, was famous for having, at different periods, saved three persons from drowning; and so fond was he of the water, that he seemed to consider any disinclination for it in other dogs as an insult on the species. If a dog was left on the bank by its master, and, in the idea that it would be obliged to follow the boat across the river, which is but narrow, stood yelping at the bottom of the steps, unwilling to take the water, the Newfoundland veteran would go down to him, and with a satirical growl, as if in mockery, take him by the back of the neck and throw him into the stream.

A native of Germany, fond of travelling, was pursuing his course through Holland, accompanied by a large Newfoundland dog. Walking one evening on a high bank, which formed one side of a dike, or canal, so common in that country, his foot slipped, and he was precipitated into the water, and, being unable to swim, he soon became senseless. When he recovered his recollection, he found himself in a cottage on the opposite side of the dike to that from which he had fallen, surrounded by peasants, who had been using the means so generally practised in that country for

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restoring animation. The account given by the peasants was, that one of them returning home from his labor, observed, at a considerable distance, a large dog in the water swimming and dragging, and sometimes pushing, something which he seemed to have great difficulty in supporting, but which he at length succeeded in getting into a small creek on the opposite side to that on which the men were.

When the animal had pulled what he had hitherto supported, as far out of the water as he was able, the peasant discovered that it was the body of a man. The dog, having shaken himself, began industriously to lick the hands and face of his master, while the rustic hastened across; and, having obtained assistance, the body was conveyed to a neighboring house, where the usual means of resuscitation soon restored him to sense and recollection. Two very considerable bruises, with the marks of teeth, appeared, one on his shoulder, the other on the nape of the neck; whence it was presumed that the faithful animal first seized his master by the shoulder, and swam with him in this manner for some time; but that his sagacity had prompted him to let go his hold, and shift his grasp to the neck, by which he had been enabled to support the head out of the water. It was in the latter position that the peasant observed the dog making his way along the dike, which it appeared he had done for a distance of nearly a quarter of a mile. It is therefore probable that this gentleman owed his life as much to the sagacity as to the fidelity of his dog.

HEROES.



MAKING the duration of the fame or notoriety of heroes a distinguishing characteristic of the tribe, we shall find this description of persons exhibiting a very remarkable sort

of variety. Descending from those gigantic forms which hold the world in awe, we shall find them "growing small by degrees and beautifully less." There is the hero of all time, the hero of a particular period or epoch, the hero of a twelvemonth, the hero of a week, of a day, of an hour, nay, there is, for we have often seen him, the hero of a minute. His is short-lived fame indeed, but enough to satisfy some ambitions. We have known the hero of a minute very proud of his brief notoriety, although he had hardly time to taste the intoxicating beverage before its towering effervescence, its deceitful froth, had vanished, leaving behind only a little rapid moisture.

The hero of all time is generally a great warrior—a mighty manslayer—one who has laid countries waste, and filled many lands with the lamentations of widows and fatherless children—a sort of personage for whom the world entertains an extraordinary reverence and respect.

The hero of a particular period or epoch is generally a statesman of an amount of talent or force of character sufficient to keep the world talking of him while he lives, but not enough to keep him in its remembrance after he is dead.

The hero of a twelvemonth is, for the most part, a political one—a gentleman who has taken the popular side of some rather toughish popular question, and has advocated it with vigor—a bustling, loud speaking, energetic fellow, with a capital front, whom nothing can daunt, who triumphs in victory, but who is never abashed by defeat.

The hero of a week is also a political one. He is a gentleman who has said some strong things on some agitating topic of the day, but who is never heard of again. He came suddenly into the world's presence, and as suddenly made his exit. Nobody can tell where he goes to, but the darkness in which he is enshrouded is so intense, that he seems to have sunk, as it were, into a sea of pitch or tar, thick, dense, impenetrable.

The remaining classes of heroes are men of local notoriety. The field of their fame is small; but they themselves do not look a bit smaller on that account. The eyes with which they contemplate their

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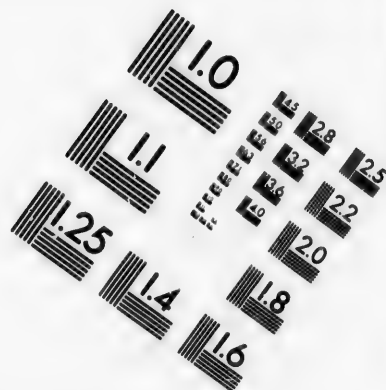
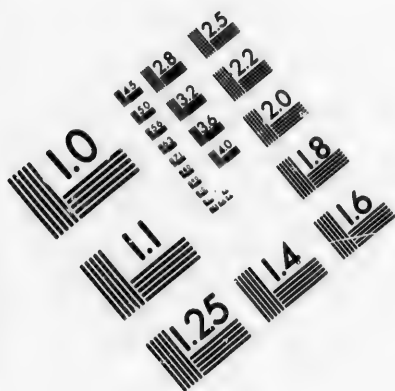
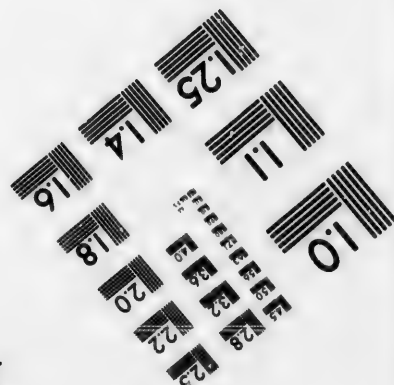
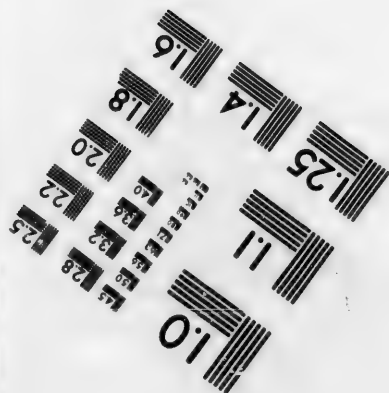
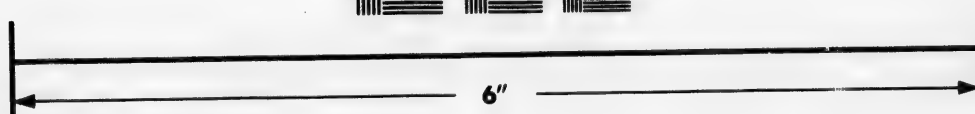
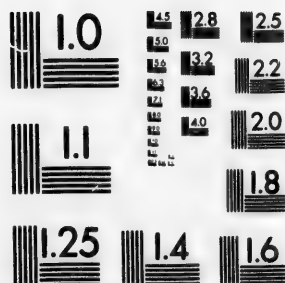


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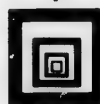


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own greatness have a magnifying power which gives them a very pleasant and comfortable view of their own importance.

The hero of a day and the hero of an hour being much alike in their leading characteristics, we do not think it necessary to treat them separately. They are gentlemen who, to the astonishment of all who knew them, and to the no small astonishment of themselves have made a pithy speech at a public meeting. They have knocked the arguments of the opposing party to shivers, and shown clearly how supremely ridiculous their ideas on the subject were. The speech is quite a hit, and creates a prodigious sensation at the moment. On the breaking up of the assembly the successful orator is pointed out, and on every side we hear, in low whispers, "There he is! there he is!—that's him! that's him!" The succeeding night, however, alas! sleeps all this reputation away; and by the morning both speech and speaker have been all but utterly forgotten.

Then there is the hero of a minute, the most amusing of the whole five. We might adduce many specimens of the class to which he belongs: one may be quite sufficient to convey a pretty correct idea of him. You have no idea, gentle reader, who he can possibly be—what sort of feat it is that gives birth to a fame so evanescent—so very short-lived. Have you ever been to a very crowded meeting in a very hot day, perhaps in July or August, when everything is glowing, melting, burning, perspiring—when you might broil steaks on the slates of your own or any other house—when vegetation is burnt up, every blade of grass looking like a brass wire—when running streams become weak and sickly, their lively brawling subsiding into a feeble and scarcely audible trickle—when every tongue is parched, and every living thing tortured by an unendurable thirst: have you, dear reader, ever been to such a meeting under such circumstances? The heat of the place is stifling, the crushing and squeezing dreadful—a feeling of suffocation oppresses the whole assembly; you think of the black-hole of Calcutta, of the horrors of which you never had half so lively an idea before. All of a sudden you hear some one

call out in a loud, determined tone—"Let down the windows!" You look in the direction of the voice, and perceive a little stout man, with a very red face, the perspiration streaming down his cheeks, and his eyes starting from their sockets, who has contrived to raise himself by some means or other above the level of the assemblage, and is making desperate efforts to reach one of the windows. All eyes are fixed upon him, and an expression of approbation of the daring little man's temerity is on every countenance. That daring little man—he who shouted, "Down with the windows!" and who afterward seemed to stand aghast at his own courage—is the hero of a minute!

ADAM'S PEAK, IN THE ISLAND OF CEYLON.



VERY amusing collection might be made of the wonderful and fabulous accounts of this mountain, given at different ages of the world, by pagan, Christian, mussulman, and Hindoo travellers; but it will be more instructive to our readers to give them an accurate description of the spot.

The peak has always been considered as a holy mount, a pilgrimage to which was highly meritorious and beneficial. It is sharp like a sugar-loaf, and on the top a flat stone with the print of a foot like a man's on it, but far bigger, being about two feet long. The people of this land count it meritorious to go and worship this impression; and generally about their new year, which is in March, they, men, women, and children, go up this vast and high mountain to worship.

Its narrow apex, which is only twenty-three paces long by eighteen broad, is surrounded by a wall, in which there are two distinct openings to admit pilgrims, corresponding to the two tracks by which alone the mountain can be ascended. The



View of Adam's Peak.

elevation of this apex is 6,800 feet above the level of the sea; the granitic peak or cone resting upon a very high mountain belonging to the chain which forms the rampart of the upper country. Nearly in the centre of the enclosed area is a large rock, one side of which is shelving, and can be easily ascended. On the top of this mass, there stands a small square wooden shed, fastened to the rock, as also to the outer walls, by means of heavy chains. This security is necessary to prevent the edifice being hurled from its narrow base by the violence of the winds. The roof and posts of this little building, which is used to cover the *Sri Pade*, or holy foot-mark, was adorned with flowers and artificial figures made of party-colored cloth. The impression in the rock is found to have been formed in part by the chisel, and in part by elevating its outer border with hard mortar: all the elevations which mark the spaces between the toes of the foot have been made of lime and sand. The impression, which is five feet and a half long, two feet and a half broad, and from one and a half to two inches deep, is encircled by a border of gilded copper in which are set a few valueless gems. According to the books respecting Buddhoo, it appears that he stepped from the top of the peak to the kingdom of Siam. The Buddhists profess to believe that the impression is a mark made by the last foot of Buddhoo which left Ceylon. We believe it was the Arabs, who traded here in very early ages, that first changed the hero of the tale, and gave the foot-mark to Adam, our first father.

ALPHABETICAL WRITING.



It is evident that the first and most obvious mode by which thought can be expressed and conveyed to the eye, is by the representation of actual objects. Hence the species of writing which the learned have termed *ideographic*, that is, in which knowl-

edge is conveyed, first, by representations of the objects of thought; secondly, by symbols. The origin of designing is coeval with that of mankind; and men early availed themselves of this art to make their thoughts visible. To make it be understood, for example, that one man killed another, they drew the figure of a dead man stretched on the ground, and of another standing by him upright, with some deadly weapon in his hand. To let it be known that some one had arrived by sea, they drew the figure of a man disembarking from a ship, and so on. This kind of writing, if we may so employ the word, was very early used in Egypt, and most probably, also, in most of the ancient nations.

In Greek, the word *graphein* signifies indifferently either to write or to paint. In Mexico, when the Spaniards landed, the inhabitants conveyed intelligence of the event to Montezuma by sending him a large cloth, on which they carefully painted what they had seen. It is unnecessary to insist on the difficulty and inconvenience of this method of writing; and to lessen these, recourse was had to the symbolic or emblematic variety of ideographic writing. In this method abbreviations or characteristic parts were introduced instead of the entire object. Thus, the ancient Egyptians are said to have represented a siege by a scaling-ladder; a battle, by two hands holding a buckler and a bow, &c. Abstract ideas were, also, represented by symbols, or sensible objects, supposed to have a certain analogy to them: as, ingratitude by a viper, providence by an eye, the head of a hawk, &c.

From ideographic was derived syllabic writing. It must have been early remarked that the sounds formed by the voice in speaking are articulate and well-defined: and the idea occurred of endeavoring to represent such sounds by appropriate signs. Thus the word republic, in the writing of which we use eight letters, would be written with three syllabic characters. The President de Goguet suspects that originally all the Asiatic nations, known to the ancients under the names of Syrians and Assyrians, used the syllabic mode of writing. We may, he thinks, discern the vestiges of this in an ancient tradition, which ascribes the invention of writing to the

Syrians; but acknowledges that the Phœnicians improved, made it more simple, and brought the characters to perfection. But this mode of writing, though a vast improvement on what is purely ideographic, is still very imperfect and cumbersome. The vast number of characters required in it overburdens the memory, and occasions the greatest confusion. The existing language of the Chinese, which is partly ideographic and partly syllabic, is an example of this. In it there are a certain number of elementary signs or keys (two hundred and fourteen), which are strictly hieroglyphic or symbolical; that is, they are abridged representations of visible objects. From these two hundred and fourteen elements all the characters of the language (80,000 it is said) are formed by varying and combining their figures; every compound character representing one or more syllables having a distinct meaning.

The defects incident to ideographic and syllabic writing being thus obvious, ingenious individuals would early endeavor to find out some simple and precise method of communicating their ideas. And at length the method of alphabetic writing, the greatest of all inventions made by man, and which has been the great instrument of his civilization, was introduced and perfected. In this method syllables are decomposed into their elements: and the few simple sounds emitted by the voice being represented each by its appropriate mark or letter, syllables and words are formed by their combination; the latter serving not only to describe external objects, but to depict the workings of the mind, and every shade and variety of thought.

Before entering into the much-disputed question respecting the origin of this mode of writing, it is necessary to indicate the new light thrown upon the subject by the recent discoveries of Dr. Young, and more especially of M. Champollion, as to the phonetic writing of the Egyptians. We have already seen that the hieroglyphical characters of that people denoted, in the first place, *objects* either of sense or thought; that is, they were ideographic. But, according to the new theory, they came in the course of time to denote sounds; and those not syllabic mere-

ly, but alphabetic. For example, the Egyptian word Ahom signified an eagle; therefore, stood for the letter A, with which that word begins.—B was represented by a censer (Berbe). R sometimes by a mouth (Ro), sometimes by a tear (Rimé). According to the views of these recent discoverers, a great proportion of the inscriptions on Egyptian monuments and papyri are partly ideographic, partly alphabetic; i. e. some characters represent objects or ideas; and these are intermingled with others which merely stand for letters. Dr. Young, who first conceived the notion of the phonetic alphabet, imagined that it was only employed when foreign words or names (as those of Greek kings), were introduced. M. Champollion carried the discovery further, and applied it to the deciphering of words and names in the language of the country. The name of the ancient king Sabaco, among others, being found by this mode of interpretation, would appear to show that the phonetic writing was used as early as 700 years B. C. It is not within our present province to discuss the question, upon what ground of probability this theory rests. But if a complete phonetic alphabet should be discovered, in the language of that country in which the earliest germs of knowledge and civilization seem to have been developed, it is probable that we shall have made a considerable step toward tracing the origin of pure alphabetic writing in other languages. As it is, although various attempts have been made to show the symbolical origin of the letters in the most ancient alphabets, it can not be said that any very satisfactory result has been obtained. And from the total want of all recorded knowledge concerning the invention of alphabetic writing, and the difficulty of accounting for it on any known principle of mental association, the hypothesis of divine revelation has obtained considerable currency; but it need hardly be observed, how ill such a doctrine agrees with all that we know by analogy of the dealings of Providence with man.

It is a common fault never to be satisfied with our fortune, nor dissatisfied with our understanding.

ROTTERDAM.



ROTTERDAM is a seaport town, situated on the north bank of the Meuse, which is there about a mile in width; it is about twenty miles from its mouth; twelve miles from the Hague, and thirty-six from Amsterdam. The breadth of the town is traversed by the Rotte or Roter, a small river which here falls into the Meuse, and gives its name to the city.

About the year 1270, the town was walled, and received the title and privileges of a city. The growth of the town to that importance which it ultimately attained was very gradual, but took place principally during the period in which the united provinces were under the yoke of Spain. The other facts of its history are soon related. Twenty-seven years after the date we have mentioned, the town was taken by the Flemings; and, in 1418, by Waldegrave, lord of Brederode. The town was taken possession of by the French in January, 1794; and it suffered much in the general decline of the Dutch commerce during the long period of war which terminated in 1815. If we add to this that the town sustained much damage in February, 1825, in consequence of an extraordinary rise of the waters of the Meuse, we have exhausted the leading facts in the history of Rotterdam.

Rotterdam owes its prosperity entirely to its advantageous situation as a commercial port. The Meuse forms there one of the safest and most commodious harbors in Europe; and the waters are so deep, that the largest vessels can come and take in or discharge their cargoes at the warehouses of the merchants in the midst of the town, by means of the numerous canals by which, even more than Amsterdam or any other Dutch city, it is intersected. It is owing to this facility that the number of vessels which enter and clear out yearly at Rotterdam has generally equalled, and often exceeded, the number at Amsterdam, notwithstanding the greater wealth and population of the latter port.

Rotterdam is built in the form of a triangle, the largest side of which extends for about a mile and a half along the right bank of the Meuse, which here resembles an arm of the sea. The town, as divided by its numerous canals into insular spots connected by draw-bridges, necessarily resembles Amsterdam. Here also the canals are generally bordered with trees, a circumstance which gives to the seaports of Holland a vernal appearance which is almost peculiar to them. The town is not fortified, but it is surrounded by a moat, and entered by six gates, two of which are toward the water. The streets of the town are in general, straight, and long, but narrow. Several of them are so very similar, that a stranger has much difficulty in recognising any distinction. The foot pavement usually consists of a line of bricks. The long and stately row of houses facing the Meuse, and called, from its row of trees, the "Boomtjes," is the finest part of the town, whether we regard its buildings or the pleasant prospect over the Meuse. Next to the Boomtjes, the quay of the Haring Vleet is the most pleasant place in the city. Many of the houses are built of free-stone, which, not being the produce of the country, must have been brought to the spot at a great expense. The celebrated Bayle once resided on this quay—and the spot on which his house stood is still pointed out to strangers. The suburbs of Rotterdam are very pleasant, and afford a very favorable specimen of the Dutch taste in rural scenery. The gardens, upon a level with the water, and divided from it by a high raised road, appear to have been all designed by a mathematician; but still their neatness and luxuriance leave a pleasing impression on the mind. Most of the principal merchants of the town have their country-seats in the suburbs. Upon most of the gates and houses there is a motto indicative of the peace of mind of the owner, or the character of the place; such as the following: "Peace is my garden,"—"Hope and repose,"—"Almost out of town,"—"Look upon those beneath you," (this was inscribed upon a large house that commanded some little cottages), "Very well content," &c. These inscriptions are seldom used but by opulent tradesmen;



Amsterdam, showing the Church of St. Lawrence.

J. ALFORD

among the higher classes they are considered to be a little tinctured with vulgarity, though they sometimes indulge in them.

The houses of Rotterdam are rather convenient than elegant, the peculiar style of Dutch architecture being more than usually prevalent there. They are of the height of four, five, or six stories, and, in some quarters, the front walls project as they ascend, so as to place the higher part of the building several feet beyond the perpendicular. In many of the houses the ground-floor is not inhabited, but serves, with its gate and arched passage, merely as an entrance to the warehouses behind. In their interior arrangements and furniture, the houses of Rotterdam, and of many other Dutch towns, possess a degree of convenience, lightness, and comfort, which is not often realized on the continent, and is, perhaps, exceeded only in this country. Altogether, no scene can at first be more novel or interesting to a stranger than that which Rotterdam presents; masts of ships enlivened by gay streamers, beautiful stately trees and lofty leaning houses appear mingled, and at one view he sees before him the characteristic features of the country, the city, and the sea.

HISTORY.



WHEREVER literature has had an influence on the minds of men, history has been one of the sources from which they have taken the most copious draughts, and by which they have become so eminently useful. Were we to take a retrospective view of the different literary characters that have flourished from the period of Homer to the present, we should find that to gain an extensive knowledge of history has been one of their chief pursuits, and upon the utility of this department of literature, they have frequently dilated. All

classes of society, the rich and the poor, the noble and ignoble, the learned and unlearned, peruse its varied pages, appreciate its benefits, and justly rank it among the beneficial studies to be pursued by the true seeker of knowledge.

All experience proves the necessity of having at least some acquaintance with history, for without it a man can not mingle in the company of the learned, or discuss with any degree of justness, even the common topics of the day. To study history is an interesting task; and he who makes a diligent search into the past knows this to be a truth worthy of approbation. The student, after pondering over Latin and Greek, and learning the science of mathematics all the day long, finds enjoyment and rest to his mind in reading over in the night watches, the scenes of former times. The philosopher with eager attention, scans every page. On the one hand, he discovers the weakness and depravity of the human heart, and, on the other, man's true intellectual character; he is also taught those precepts and doctrines which support his opinions and contribute to his advancement. The orator seeks time to view the amazing revelations of history. There he meets with examples worthy of imitation and admiration; their lives, actions, and productions, he examines with unwearied diligence, for, by this means, he forms a just estimate of an orator, and perceives what he must do to gain an ever-enduring reputation among men. The legislator reviews the historic page with pleasurable interest; it shows him in what manner the governments and laws of different countries have acted upon human society, and under what circumstances thrones have been demolished, and kingdoms desolated. It explains those means by which nations enjoying the rich blessings of affluence and prosperity, have suddenly been hurled into ruin. It assists him in devising laws which will have a tendency to moralize the community and advance it in power and intelligence. The military chieftain takes delight in surveying the manners and discipline of those renowned warriors who grace the annals of the past. It is by them he judges his own rules and methods, and by comparing them he culls

those which would be the most suitable to his designs. The poet, with watchful eye and anxious heart, searches the history of battles, grand achievements, exploits of reputable heroes, and the writings and personal qualities of distinguished bards. The secret operations of nature are thus openly revealed, and subjects of careful meditation are amply afforded him. Thus we might go on to show the usefulness of history to the sculptor, and all professions and gradations in human life; but thus much is sufficient.

"History," as a modern writer correctly remarks, "is calculated to enlighten the judgment upon those subjects which have a direct bearing, not only upon individual utility and comfort, but also on the welfare of community at large."

"It leads to a knowledge of man in his social relations, and speaks with a warning voice to the oppressor, and infuses consolation and courage into the oppressed. Upon the high principle of religious motives, virtue has been roused to exertion, or has been strengthened to the endurance of remediless wrong by a belief in a future state." It directs man to the accurate principles on which to establish society, and instructs him to avoid the gross opinions which have been advanced for the sole purpose of corrupting and demoralizing the human race, and places him in the virtuous path that will guide to fortune, power and fame. It exhibits the secret springs of all human governments, and evinces the proper, firm foundation on which to erect a *governmental* fabric that will endure the raging scourges of time. It teaches the instability of human greatness, the changes that have controlled the happiness of man. Men have been raised to importance, and to be the rulers of mighty nations, and in the midst of all the honors issuing from such a source have suddenly sank into oblivion and utter forgetfulness. It discloses the many fascinating habiliments which vice has assumed, and by means of which the world has been deluged with crime, and covered with total darkness. It speaks in soul-thrilling accents to shun all the temptations and blandishments of sin, and direct the mind to the contemplation of a nobler and more enchanting theme, the Deity—the

rewarder of good, and the punisher of evil. Christianity, the beacon light of modern history, is fast illuminating the pathway of man, and guiding immortal mind to the acme of glory and perfection to which its Creator has destined it.

THE HEART.



HE heart has an appropriate sensibility, by which it is held united in the closest connexion and sympathy with the other vital organs; so that it participates in all

the changes of the general system of the body.

But connected with the heart, and depending on its peculiar and extensive apparatus is what demands our attention; and this is the organ of breathing: a part known obviously as the instrument of speech, but which proves to be more. The organ of breathing, in its association with the heart, is the instrument of expression, and is the part of the frame, by the action of which the emotions are developed and made visible to us. Certain strong feelings of the mind produce a disturbed condition of the heart; and through that corporeal influence, directly from the heart, indirectly from the mind, the extensive apparatus constituting the organ of breathing is put in motion, and gives us the outward signs which we call expression. The man was wrong who found fault with nature for not placing a window before the heart, in order to render visible human thoughts and intentions. There is, in truth, provision made in the countenance and outward bearing for such discoveries.

One, ignorant of the grounds on which these opinions are founded, has said, "Every strong emotion is directed toward the heart: the heart experiences various kinds of sensation, pleasant or unpleasant, over which it has no control; and thence the agitated spirits are diffused over the body." The fact is certainly so, although the language be figurative. How are these spirits diffused, and what are their effects?

We find that the influence of the heart upon the extended organ of respiration has away at so early a period of our existence, that we must acknowledge that the operation or play of the instrument of expression precedes the mental emotions with which they are to be joined, accompanies them in their first dawn, strengthens them, and directs them. So that it is not, perhaps, too much to conclude that, from these organs moving in sympathy with the mind, the same uniformity is produced among men, in their internal feelings, emotions, or passions, as there exists in their ideas of external nature from the uniform operations of the organs of sense.

Let us place examples before us, and then try whether the received doctrines of the passions will furnish us with an explanation of the phenomena, or whether we must go deeper, and seek the assistance of anatomy.

In the expression of the passions, there is a compound influence in operation. Let us contemplate the appearance of terror. We can readily conceive why a man stands with eyes intently fixed on the object of his fears, the eyebrows elevated to the utmost, and the eye largely uncovered; or why, with hesitating and bewildered steps, his eyes are rapidly and wildly in search of something. In this, we only perceive the intent application of his mind to the object of his apprehensions—its direct influence on the outward organ. But observe him further; there is a spasm in his breast, he can not breathe freely, the chest is elevated, the muscles of the neck and shoulders are in action, his breathing is short and rapid, there is a gasping and convulsive motion of his lips, a tremor on his hollow cheek, a gulping and catching of his throat; and why does his heart knock at his ribs, while yet there is no force of circulation?—for his lips and cheeks are ashy pale.

So in grief, if we attend to the same class of phenomena, we shall be able to draw an exact picture. Let us imagine to ourselves the overwhelming influence of grief on women. The object in her mind has absorbed all the powers of the frame, the body is no more regarded, the spirits have left it, it reclines, and the limbs gravitate; they are nerveless and

relaxed, and comes at intervals the long-drawn sigh?—what causes the swelling and quivering of the lips, and the deadly paleness of the face?—or why is the hand so pale and earthy cold?—and why, at intervals, as the agony returns, does the convulsion spread over the frame like a paroxysm of suffocation?

It must, be acknowledged, when we come to arrange these phenomena, these outward signs of the passions, that they can not proceed from the direct influence of the mind alone. However strange it may sound to unaccustomed ears, it is to the heart and lungs, and all the extended instrument of breathing, that we are to trace these effects.

Over such motions of the body the mind has unequal control. By a strong effort the outward tokens may be restrained, at least in regard to the general bearing of the body; but who, while suffering can restrain the natural fulness of his features, or the healthful color of his cheek, the unembarrassed respiration and clearness of the natural voice? The villain may command his voice, and mask his purpose with light and libertine words, or carry an habitual sneer of contempt of all softer passions; but his unnatural paleness, and the sinking of his features, will betray that he suffers. Clarence says to his murderers:—

"How deadly dost thou speak!
Your eyes do menace me. Why look you pale?"

But the just feelings of mankind demand respect; men will not have the violence of grief obtruded on them. To preserve the dignity of his character, the actor must permit those uncontrollable signs of suffering alone to escape, which betray how much he feels, and how much he restrains.

THE SABBATH.—The people of nearly all nations have a special regard for one day in each week. Christians observe Sunday; the Greeks, Monday; the Persians, Tuesday; the Assyrians, Wednesday; the Egyptians, Thursday; the Turks, Friday, and the Jews, Saturday. Thus every day in the week is a sabbath in some country, and it would be well for all to remember that "it is right to do good on the sabbath-day."

THE LYNX.



THE lynxes form a small section in the very extensive genus *felis*, or cat tribe of animals, in which they are principally distinguished by the length of the fur, the shortness of the tail, and by the brushes of hair with which their ears are furnished.

The lynx is about the size of a moderately large dog, measuring about two feet and a half from the head to the commencement of the tail, which is about six inches long, the eyes, which are proverbially piercing, are of a pale yellow color. The long and soft fur is generally of a bright red color, marked on the back and limbs with blackish-brown spots; three lines of black spots on the cheeks join a large black oblique band on each side of the neck under the ear: the fur of these parts is longer than elsewhere, and forms a kind of lateral beard. The forehead and top of the head are dotted with black; and on the top of the neck there are four lines of the same color, the middlemost of which is broken and interrupted. The dark spots form two oblique bands on the shoulders, and transverse bands on the fore-legs.

The lynx was formerly spread over the Old World. It was common in France, and has only disappeared from Germany at a comparatively recent period. It is still found in the north of Europe, and even in Portugal and Spain. It is very common in the forests of northern Asia, and in the Caucasus. That which inhabits the more southern parts of Asia, and is found in Africa, is a rather distinct variety called *caracal*, a contraction of the Turkish name *kara*, black, and *kulack*, ear. It is chiefly distinguished by its uniform vinous red color, by its ears, which are black both without and within, and by a longer tail than any other lynx possesses. America is known to have two, or perhaps three varieties of the lynx. The first is that which, after Buffon, is called the Canada lynx. Its color is gray, its tail is longer than that of the common lynx, and

the hairs on the ears are shorter. Some individuals have the fur so thick and long, especially on the paws, that they have a very different appearance from the European lynx; the identity of which with this species is asserted by some naturalists and disputed by others. It is found in great abundance in the districts about Hudson's bay, whence from 7,000 to 9,000 skins are yearly exported. It is a timid creature, and makes but slight resistance when brought to bay by the hunter; for though, like the cat, it spits and erects the hair on its back, it is easily destroyed with a slender stick. The other variety (*felis rufa*) which is found in the United States, is smaller than the one just mentioned. It has the form and distribution of spots of the European variety; but the ground color is gray; its spots are more numerous, deeper on the back, and paler on the sides and limbs.

The howl of the common lynx has a considerable resemblance to that of the wolf. When assailed, it is by no means passive. When attacked by a dog, it lies down on its back, and strikes so desperately with its claws, that it frequently compels the assailant to withdraw.

THE APPEARANCES OF DESIGN IN THE UNIVERSE.



Every part of the universe with which we are acquainted exhibits evident marks of design, we must of necessity infer, that it sprang from a Wise and

Intelligent Cause. The inference is obvious and undeniable. It is, indeed, principally upon this argument, that our belief in the existence of God is founded; and as it has been often placed in a false light by atheists and skeptics, we shall endeavor to vindicate its justness from the objections of some able, and chiefly of some late opponents.

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subject, it is necessary to have a precise and accurate notion of what is meant by design, because some persons seem not to have given sufficient attention to this matter, and have involved themselves in perplexity.

In common life we understand distinctly what is meant by design. We say that a man acts with design and foresight, when his actions tend to bring about some end, and were performed by him with this view. If a man propose to make a clock, and adjusts wheels and weights to one another, so that a motion is produced by means of which the hours are pointed out, we say that he acts with design, and we say that the piece of work which is produced manifests contrivance. Whenever anything is properly adapted for producing an end, or answering a purpose, we say it is done with design. It is in this sense that the word design has been employed in stating this argument. It has been shown, that important ends are served by means of the bodies of which the material world consists, and that their revolutions are directed to the accomplishment of certain valuable purposes. It has also been shown, that the fabric and limbs of the human body, and the faculties of the human mind, are well fitted for those offices which they perform. In all these things there are undeniable marks of wisdom and intention.

When there appears design or contrivance in anything, the question naturally occurs, from what did it proceed? and the obvious answer is, that it proceeded from a designing cause. In this case there is no occasion for any chain of reasoning. The judgment is formed intuitively, and without any intermediate step. That every effect must have a cause, is an axiom manifest to every person; and it seems to be equally evident, that every effect that exhibits marks of design, must have proceeded from a designing cause. Whatever is well adapted for answering an end, must have been adapted by its author and contriver to answer that purpose. No judgments we can form appear to be more self-evident than these; and accordingly they seem to have been formed by the whole of mankind, with respect to every subject to which they are applicable.

It may then be laid down as a first principle, founded on the constitution of our minds, and standing in need of no proof whatever, "that design, wherever it is observed, naturally, and therefore necessarily, suggests to us the notion of a cause." The one conception is always connected with the other. We apply this principle in all the common affairs of life. If we behold a ship well built, completely rigged, and properly accommodated for containing a cargo of goods, or for lodging a number of passengers during a long voyage, we never hesitate in pronouncing, that it must have been the workmanship of a skilful carpenter. If we look at a palace adorned with all the elegant ornaments of architecture, and conveniently disposed for the accommodation of its inhabitants, and for exhibiting to spectators their splendor and magnificence, we can not entertain the slightest doubt of its having been contrived by an architect, and executed by the hands of artists, adequate to such a noble piece of workmanship. If we were going through a desert, and saw a wretched hovel erected, though we observed no vestige of living creatures near it, we would immediately ascribe it to intelligent beings, and conclude, without further reflection, that man had once been there. Aristippus, the philosopher, was shipwrecked upon an island; and he, along with his fellow-sufferers, were walking on the shore, deploring their miserable fate, and not doubting but they would soon be attacked and destroyed by barbarians, or torn to pieces by wild beasts. While they were in this situation, the philosopher made a discovery which dispelled his own fears; and by means of which he was enabled to rouse the drooping spirits of his companions. He perceived certain mathematical figures scratched upon the sand of the seashore. The judgment which he formed was certain, and it was immediate. "Let us take courage, my friends," said he, "for I discern the vestiges of civilized men." He never imagined that regular figures, adapted to the demonstration of abstract truths, could have been accidentally formed by the foot of a sea-fowl; nor even that they could have been drawn by the hand of savages. In these suppositions there would have been no

laid down as a first principle on the constitution of the universe, standing in need of no further proof. That design, wherever it is to be found, is the result of necessity, and therefore necessarily leads us to the notion of a designing cause. The conception is always the same. We apply this principle to the common affairs of life. We see a well built, completely furnished, and properly accommodated for the reception of goods, or for lodging passengers during a long journey, and we hesitate in pronouncing it to be the workmanship of chance. If we look at a building with all the elegant ornamentation, and conveniently accommodated for its intended use, exhibiting to spectators a magnificent magnificence, we can not doubt of its having been the work of an architect, and executed by artists, adequate to such a workmanship. If we see a desert, and saw a city erected, though we observe no living creatures near it, we immediately ascribe it to intelligent design, and conclude, without further proof, that man had once been there. The philosopher, who was banished on an island; and he, who, as a sufferer, was walking in the desert, deploring their miserable situation, but they would soon be destroyed by barbarians, or by wild beasts. While in this situation, the philosopher, by the very means which dispelled his gloom, by means of which he was able to perceive the drooping spirits of his fellow-sufferers, he perceived certain marks scratched upon the sand. The judgment which he made was certain, and it was immediate. "Take courage, my friends," he said, "I discern the vestiges of a designing cause. He never imagined that the universe was adapted to the demonstration of truths, could have been formed by the foot of a sea-monster, that they could have been the work of savages. In these circumstances there would have been no

probability. He instantaneously judged that they must have been constructed by men, who had made progress in knowledge and mental improvement; and who, of consequence, must have attained to gentle and polished manners. If we hear a tune well played, we never imagine that the sound is produced without the efforts of a musician; and if we read an excellent poem, we are immediately convinced that it is the work of a good poet. We never imagine that letters accidentally thrown down, could form themselves into an Iliad or an Eneid. We do not even imagine that a person of small abilities could have arranged words, or contrived incidents, so as to have formed works of such distinguished merit. We are naturally led to assign a cause adequate to the effect, and to ascribe poems of such beauty and grandeur to minds of a superior order. In our connexions with men, in the same manner, we observe their words and their actions. We consider these as effects proceeding from an internal cause. We judge of the cause from the effects which we observe; and we conclude, that he who acts and speaks with prudence and discernment, must possess faculties corresponding to his behavior.

All these judgments proceed from our constitution. We are so made that we naturally form them, just in the same manner as we pronounce snow to be white; or as we infer the existence of a substance from discerning its qualities. The whole of mankind form similar judgments, and they do it intuitively. They use no argument on such subjects, and they can use none. They employ no intermediate steps, as in a chain of reasoning; and do not arrive at their conclusion by adjusting premises to one another.

If we judge in this manner in the ordinary transactions of life, it is surely to be expected that we should judge in the same manner with respect to the design and contrivance discernible in the fabric of the universe. If a mathematical figure be scratched upon the sand, we instantaneously ascribe it to a designing cause, and acknowledge that he who formed it was a man acquainted with certain abstract truths. If we observe a building or an elegant contrivance, we ascribe them to

an artist. If we see well-directed conduct, we conclude that he who performed it is a prudent agent. Can we then behold the regularity and order of the universe, the subservience of every part to the rest, the excellent adjustment of means to ends, and the invariable succession of revolutions, without pronouncing immediately that there must be an intelligent cause that produced them? It is impossible to behold the planetary system, to consider how nicely its parts are fitted to one another, how regularly its motions are directed, and how beneficial every part of it is to living creatures, without declaring that it is the workmanship of a wise being. The bodies of animals are infinitely better constructed, and are also much more complex, than the best machine of human contrivance; and if no person ever thought a watch was formed without intention, can any person imagine that animal bodies were produced without an artist?

If we take into consideration the provision that is made for the support of animal life, the instinct with which every creature is furnished, its appetites and its passions adapted to its manner of life, we observe still more and more reason for drawing the same conclusion. The faculties which man possesses, the powers of understanding and of action, and his capacity for discerning what is fair and beautiful, and of prosecuting what is honorable and proper, must obtain from every candid mind an acknowledgment that this lord of the lower world must have been formed by the hand of wonderful intelligence. "He that planted the ear, shall he not hear? He that formed the eye, shall he not see? He that teacheth man knowledge, shall he not know?" The judgment in this case is as natural and necessary as in any other whatever. It flows from a principle in our constitution, and it has been formed in all ages.

These judgments which we form concerning causes, from observing their effects, must be founded upon an original principle in our constitution. They are universal, and yet nobody assigns a reason for them. They are evidently not conclusions from reasoning. It is impossible to point out any intermediate steps by which they are proved, and nobody has

attempted it. No man can give any argument by which it can be shown, that a mathematical figure must be the work of an intelligent being, and could not be the work of a fowl or of a quadruped. We judge indeed in this manner, but we can assign no reason for our judgment, any more than we can assign any reason why we judge that two and two make four. Neither did we learn to judge in this manner by experience. From experience we can acquire knowledge only concerning contingent truth or matters of fact, which may be, or may not be, without any absurdity. We can never learn from experience any knowledge concerning necessary truths which must be, and which it involves an absurdity to suppose not to be. We may learn from experience that bodies gravitate. This is not a necessary truth; it is only contingent, and depends on the will of the Creator; and if he had pleased, bodies might had opposite properties, or might not have existed. But we can not learn from experience that the whole is equal to all its parts. This is a necessary truth, and necessarily flows from the notions we have of a whole and of its parts. It must be true; and it is impossible, and involves absurdity, to think otherwise. Now, our judgments concerning the connexion of effects and causes, are judgments concerning necessary truths. We do not judge that the connexion *may* take place, but that it *must* take place. These judgments, therefore, are of such a nature, as experience can not suggest.

Some persons, unwilling to admit that the world sprung from a designing cause, have pretended that everything sprung from *chance*, or from absolute *necessity*. That the world arose from accident, was strongly urged by the ancient Epicureans; and that it sprung from necessity, or absolute and undirected fate, has been insisted upon by some speculative atheists and skeptics, both in ancient and modern times. It is, however, to be remarked, that these are only forms of expression, without any clear and distinct meaning. Chance and absolute necessity are words expressing certain abstract notions; and neither the notions, nor the terms that denote them, can possibly be the causes of anything whatever. They are not ac-

tive beings, capable of accomplishing any end. In common language we attribute many things to chance. If a die be thrown, we say it depends upon chance what side may turn up; and, if we draw a prize in a lottery, we ascribe our success to chance. We do not, however, mean that these effects were produced by no cause, but only that we are ignorant of the cause that produced them. There are mechanical causes, which determine what side of a die will cast up, as certainly as anything else; and if we could adjust perfectly the degree of force with which it is thrown, and particular direction, together with the nature of the surface on which it passes, we could tell precisely what side would appear. This, however, we can not do; and because the event depends on circumstances which we can not foresee, we ascribe it to a cause of which we are ignorant; and to such uncertain and undetermined causes, we give the name of chance; not meaning that there is no cause, but that we can not ascertain it.

Again, when all things are ascribed to necessity, if those who use the term have any meaning at all, they can not mean that they sprung from no cause; they must only mean that the cause, whatever it was, acted necessarily, and not from choice. They must conceive the first cause to have been actuated by some involuntary force, as a machine is moved by weights and springs, so that the effect must necessarily be produced; and can not mean that there was no cause. If we ascribe, then, everything to chance, we do not exclude a cause; we only say we do not know what that cause is. If we ascribe everything to necessity, we also admit a cause, though a different one from what is admitted by those who acknowledge design. The only question then is, whether the cause admitted to be a designing cause or not?

That the universe must have proceeded from a *designing* cause, and could not possibly have proceeded from a cause without design and intelligence, by whatever name it may be denominated, whether it be called chance, or necessity, or fate, is exceedingly obvious. Nothing beautiful, regular, and orderly, ever proceeded, or can pro-

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ceed, from an undesigning cause. Suppose matter to have existed originally of itself, and to have been endued with motion from eternity; and suppose that motion to have been continued without diminution; there is no doubt but these materials, continually agitated, would, in the course of millions of ages, have assumed various forms; but there is no probability that ever these forms would have been regular, and much less that there should be regularity in all their revolutions, mutual connexions, and dependencies. Did ever chance form a machine so regular as a watch? Throw the different wheels, and springs, and pinions, of which a watch is composed, into one vessel, and keep the whole in motion for ages, and after all, neither the whole, nor any part of them, will ever be properly placed and adjusted. Take a case that has often been put in handling this argument. Suppose a triangular prism, with three unequal sides, and a scabbard perfectly adapted to it, to be both set in motion through empty space; grant both of them the power of altering their motions, and of flying up and down in every possible direction, it is infinity to one that they will never meet. Supposing they did meet, it is still infinity to one that they do not meet in that one particular direction in which the prism will enter its scabbard. If chance, then, can not effectuate those simple adjustments, to which the design of a child is equal, how can it be imagined that it should adjust the innumerable parts and revolutions in the universe? There is not the slightest shadow of probability to justify such a supposition. Even though chance should sometimes have stumbled upon a regular form, after a variety of trials—in the way that Epicurus imagined men, and animals, and vegetables, to have been fashioned—these forms would again have been immediately destroyed, in the same manner that the monstrous appearances that had existed before them, in infinite multitudes, were destroyed, in consequence of the motion and changes of situation which, upon that supposition, are always going on among the particles of matter. If chance never could arrange unorganized matter into those beautiful and regular forms with which we see it invested, could it, or necessity, or any

blind cause, by whatever name it may be called, ever produce a being endued with life, sensation, intelligence, and the power of voluntary action? Can that which has itself no design or understanding, produce a wise and intelligent mind? The supposition is absurd. It is supposing an effect to be produced by an inadequate cause; which is precisely the same thing as to suppose it produced by no cause at all. It is strange that such an opinion should have ever been embraced by philosophers, the folly of which is manifest even to a child. An infant, if its bells on its rattle be taken away, never dreams that they were taken away by nobody, but immediately judges that they were removed by some person or other. Even a dog, if a stone be thrown at him, never imagines that the pain he feels arose without a cause. He either flies from the place, that he may be exposed to no further sufferings, or he turns with resentment to defend himself. If an inhabitant of Terra del Fuego, or Lapland, who had never seen an army, nor knew the use of firearms, were brought to see a regiment reviewed, would he imagine that all their orderly motions and evolutions were the effects of blind chance? Would he not immediately perceive that they arose from design and premeditation? The motions of a single human body are much more regular, and more various, than those of a large body of soldiers upon a field-day. Why then imagine that these motions are carried on without design? What then shall we say of the regularity observable in the whole human race, in inferior animals, in plants, in unorganized matter, and through the whole extent of the universe? Or, what shall we say of the intelligence of that man, who seriously believes that the whole is produced without a designing cause?

LIFE A JOURNEY.—Consider heaven as your home; yourself as on a journey to it; the affliction you meet with as a course of discipline to prepare you for it; and the treasures you may possess as given to defray your expenses on the way, and to enable you to do something for those who do not enjoy your blessings.

THE GNU.



THE gnu appears as if it were a compound of the horse, ox, and stag, for it partakes of the characters of all three, and not the least of those of the horse; in fact, the neck, body, and tail, are those of a well-formed small horse; the former is furnished with a mane, and the tail is long and flowing. The limbs are slender, vigorous, well-knit, and resemble those of a stag, while the head and horns remind us of the buffalo. The eyes are lowering, and expressive of great ferocity; the horns, which are common to both sexes, closely resemble those of the savage cape buffalo, except that they are smaller: they arise from a basal mass of horn, expanding like a helmet over the forehead, whence they sweep downward between the eyes, and then suddenly turn upward, and somewhat outward, ending in a sharp point. Their situation is altogether such as to overshadow the eyes, producing an aspect of suspicion and vindictiveness. The chaffron is furnished with a mane-like tuft of bristly hairs; and the chin and throat are covered with hairs of a similar character, also forming a shaggy beard, while a full mane flows down from the under-side of the neck, and from between the fore-limbs; that along the upper ridge of the neck being thick and upright. The head is heavy; and the muzzle is expanded into a thick muscular valve, or flap, which shuts down like a lid, so as to close the aperture of the nostrils, which are thus capable of being opened or closed at will. The lachrymal sinus consists of a small gland below the angle of each eye, and concealed in a tuft of long hair, by which it is entirely surrounded.

The gnu is a native of the wild karroos of South Africa, and the hilly districts, where it roams sometimes singly, but mostly in large herds, which migrate according to the season. The extent of its range in the interior regions is not known. As far, however, as travellers have penetrated, herds have been met and chased; for its flesh is prized as food both by the

natives and the colonists. They are, however, extremely wild, and not to be approached without difficulty. On the first alarm, away scours the troop, not in a tumultuous mass, but in single file, following a leader; and as they are seen galloping in the distance over the plain, they so much resemble zebras, or quaggas—tenants of the same wilds—that were it not for the difference of color, they might easily be mistaken for those animals. The general color of the gnu is deep umber-brown, ranging upon black; the tail and mane are gray, the latter, indeed, nearly white. Their speed, as might be expected from the vigor and compactness of their body and limbs, is very great. When first alarmed, however, they do not exert it, but plunge about, flinging out their heels, butting at various objects, and exhibiting emotions of violent fury. It is seldom that they venture upon an attack unless hard pressed, or wounded, when they defend themselves with desperation: dropping on their knees, they dart forward upon their rash enemy with extraordinary force and impetuosity, and unless he be cool and prepared, he can not escape his fate.

That the gnu is sometimes seen single appears from the account of Sparrman, who observes, "On the 24th I was induced to stay longer a little longer on this spot, by the hopes of shooting a gnu which had been seen ranging by itself about this part of the country. *T'Gnu* is the Hottentot name for a singular animal which, with respect to its form, is between the horse and the ox. The size of it is about that of a common gallows, the length of it being somewhat about five feet, and the height of it rather more than four. The gnu then wandering in these parts was probably an old buck, which did not care to keep company any longer with the herd to which it belonged, or had been accidentally separated from it. As this that was seen here kept upon the open plains, and we could not steal upon it by creeping towards it from among the bushes, I endeavored to overtake it on horseback; and, indeed, at first I got almost within gunshot of the animal, when it showed its vicious disposition in making various curves and plunges, flinging out behind with

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one or both legs, and butting against the mole-hills with its horns; but immediately upon this, it fled with considerable velocity in a direct line over the plain as far as the eye could discern it, and I can not help thinking that this was one that was become furious, as the other gnus I have chased since, would frequently stop to look back at their pursuers, as soon as they had gained ground of them in any considerable degree. What contributed not a little to this gnu's having escaped me, was that the ground was rocky; and that an ardent desire for dissecting this animal induced me to push my horse on too fast at first, so that in a little time it was quite out of breath, and all over in a tremor." Indeed, so excessively was the horse fatigued, that Sparrman could not even chase a jackal that was feasting on an elk-antelope shot the day before. At a subsequent period he met with large herds of gnus, and was more successful. Mr. Pringle observed the gnu among the hills at Bavian's river: he informs us that its flesh in all its qualities, has much resemblance to beef. He also asserts, that, like the buffalo and ox, this animal is enraged by the sight of scarlet. "It was one of our amusements to hoist a red handkerchief on a pole, and observe them caper about, lashing their flanks with their long tails, and tearing up the ground with their hoofs, as if they were violently excited and ready to run down upon us; and then all at once, as we were ready to fire upon them, to see them bound away, and again go prancing round us at a safer distance." This aversion to scarlet we have ourselves noticed in individuals in captivity, and on one occasion, much enraged a gnu by suddenly displaying the scarlet lining of a cloak.

The gnu when taken young may be tamed without much difficulty. Sparrman caught a calf, and as he says, "had likewise previously seen and examined another tame one of the same size which was intended as a present for the governor: it was feared, however, that this as well as the young *hartebeests* which they were endeavoring to bring up tame, would be subject to a kind of furor or madness." Why so we are not informed. Mr. Pringle assures us that the gnu taken young will become as domesticated as the cattle of the

farm, with which it associates, harmlessly going to and returning from pasture; it appears, however, that few farmers like to domesticate it, as it is liable to a cutaneous eruption which it communicates to the cattle, and which is invariably fatal. In confinement the gnu often becomes ferocious, and is not to be approached without caution; the females are less dangerous than the males, and more easily manageable.

THE PHILOSOPHY OF MYSTERY.



HE phosphorescence of the marshes, the ignis fatuus, Will-o'-the-Wisp, Jack-o'-the-Lantern, or Friar Rush, and the Corpse Candles, are mere luminous exhalations,

strained into the marvellous by the vulgar, and thus set down as heralds of immortality.

The parhelia, or mock suns, are produced by the reflection of the sun's light on a frozen cloud.

The corona, or halo around the sun, moon, and stars, is easily illustrated by the zone, formed by placing, during a frost, a lighted candle in a cloud of steam or vapor. The Aurora Borealis is *arctic electricity*, and is beautifully imitated by the passage of an electric flash through an exhausted glass cylinder. The rainbow is a combination of *natural prisms*, breaking the light into colors; and it may be seen in the cloud, or in the spray of the ocean, in the cascade of Niagara, or indeed, in any foaming spray on which the *meridian* sun-beams fall, or even in the dewy grass, lying, as it were, on the ground.

The "Spectro of the Brocken," is a mere shadow of the spectator, or a gigantic scale. The phantom, the "Schattermann," according to vulgar tradition, haunts the lofty range of the Hartz mountains, in Hanover. It is usually observed when the sun's rays are thrown horizontally on their fleecy clouds, or vapor, of highly reflective power, assuming the shape of a gigantic shade on the cloud.

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by drawing down the electric fluid from the thunder-cloud, and when Columbus told to the hour the sun's eclipse, can we wonder that the Indians listened as to one endowed with preternatural knowledge, or that the other might be thought superhuman? And when the king of Siam was assured that water could be congealed into ice, on which the sounding skate could glide, can we wonder that he smiled in absolute disbelief of such a change, and called the tale a lie? Thus, when the peasants of Cardigan, who were not versed in Pontine architecture, looked on the bridge which the monks had thrown across the torrent of the Monach, they could not believe it a work of human, but of *infernal* hands, and called it the "Devil's Bridge."

The records of antiquity teem with tales of fatal prognostics to heroes, kings, and emperors, whose deaths, indeed, seldom take place without a prophecy. From Aristotle, we learn that the death of Alexander was foretold in a dream of Eudemus, and that of Cæsar by his wife, Calphurnia. The emperor Marius dreamed that he saw Atilia's bow broken, and the Hun king died on the same night; and Sylla died on the night succeeding that on which he dreamed of such a fate. Valerius Maximus, records the death of Caius Græchus immediately after a dream of it, by his mother. Caracalla foretold his assassination in a dream. Cyrus dreamed of the exact moment in which he died. The death of Socrates was foretold to him by a lady. The essence of the dream is usually a *want of balance between the representative faculty and the judgment*; being produced, directly or indirectly, by the excitement of a chain of ideas, rational or probable in parts, but rendered in different degrees extravagant, or illusive, by imperfect association. Thus, the ideas of a dream may be considered a species of delirium; for the figures and situations of both are often of the most heterogeneous description, and both are ever illusive, being believed to be realities, and not being subject to the control of our intellect. Yet, if the most absurd dream be *analysed*, its constituent parts may consist either of ideas, in themselves not irrational, or of sensations or incidents, which have been individually felt or witnessed.

Napoleon, when he was marching upon Acre, had a Nile boat which some of his troops destroyed; the boat's name was *L'Italie*, and from this he said, "Italy is lost to France." And so it was.

During the siege of Jerusalem, for seven days, a man paraded round the walls exclaiming, with a solemn voice, "Wo to Jerusalem!" and on the seventh day he added: "Wo to Jerusalem and *myself*!" when at the moment of this anathema, a missile from the enemy destroyed him.

When dark events were overclouding Poland, to Sorvenski, the warrior, a convert to magnetism, it was imparted in a vision that Warsaw should be deluged in blood, and that he should fall in battle. In two years these forebodings were fulfilled.

Oliver Cromwell had reclined on his couch, and extreme fatigue forbade the coming on of sleep. On a sudden his curtains opened, and a gigantic female form imparted to him that he should be the greatest man in England. The puritanical faith and ambition of Cromwell might have raised during the distracted state of the kingdom, something even beyond this; and who may decide if the spectre had whispered "thou shalt be king hereafter," that the protector would have refused the crown, as on the feast of Lupercal, it had been refused by Cæsar.

An officer in the duke of Marlborough's army named Prondergast, mentioned to many of his friends that he should die on a particular day. Upon that day a battle took place with the French, and after it was over, and Prondergast was still alive, his brother officers, while they were yet in the field, jestingly asked him where was his prophecy now. Prondergast gravely replied, "I shall die yet, notwithstanding what you see." Soon afterward there came a shot from a French battery, to which the orders for a cessation of arms had not yet reached, and he was killed upon the spot.

But can these shallow stories be cited as *prophecies*? The links in the chain of causation are evident, and the veriest skeptic can not doubt their sequence, where there was so strong a probability. It is merely by reflecting on the past, and judging the future by analogy. Natural

events of human actions have laws to govern them, and there is seldom foresight without the reflection on these laws. Lord Mansfield, when asked how the French revolution would end, replied, "It is an event without a precedent, and, therefore, without a prophecy."

"In 1811," writes Lord Byron, in a letter to Mr. Murray, "my old school and former fellow-poet, the Irish secretary, told me he saw me in St. James' street. I was then in Turkey. A day or two afterward, he pointed out to his brother a person across the way, and said, 'There is the man I took for Byron.' His brother answered, 'Why it is Byron, and no one else.' I was at this time *seen* to write my name in the palace book. I was then ill of a malaria fever. If I had died, here would have been a ghost story."

A farmer of Teviotdale, riding home in the gloom of the evening, saw, on the wall of a cemetery, a pale form, throwing about her arms, and moving and chattering to the moon. With not a little terror, he spurred his horse, but as he passed the phantom it dropped from its perch, and, like Tam O'Shanter's Nannie, it fixed itself on the croup of his saddle, and clasped him tightly round the waist with arms of icy coldness. He arrived at home, and with a thrill of horror exclaimed, "Take off the ghaist!" and was carried shivering to bed. And what was the phantom? A maniac widow, on her distracted pilgrimage to the grave of her husband, for whom she had mistaken the ill-fated farmer.

The president of a literary club at Plymouth being very ill during its session, the chair, out of respect, was left vacant. While they were sitting, his apparition, in a white dress, glided in and took formal possession of the chair. His face was pale and cadaverous; he bowed in silence to the company; carried his empty glass to his lips, and solemnly retired. They went to his house, and learned that he had just expired! The strange event was kept a profound secret, until the nurse confessed on her death bed that she had fallen asleep, that the patient had stolen out, and, having the pass-key of the garden, had returned to his bed by a short path before the deputation, and had died a few seconds after.

MOURNING WOMEN OF THE EAST.



EW oriental customs appear so strange to the traveller, as the rites and ceremonies performed in eastern countries on the decease of a Moslem. On the occasion of a death, in the east, the

women of the family, the mother, wives, sisters, &c., break out into the most violent lamentations, crying out, "O, my master! O, camel of the house! O, my misfortune!" &c., in which they are often joined by the females of the neighborhood, who come to the house of mourning and unite with the inmates in their wailings. But that their grief may be expressed with all the exaggeration possible, there are certain individuals who make it their business to weep and lament for the dead, and who offer their services on all such occasions, "for a consideration;" depending on such exertions for their livelihood. That is to say, in all Moslem cities there are women who may be hired to attend on the corpse, and to aid the mourners in bewailing the death of their friend, which they do with the most violent gesticulations, weeping, shrieking, rending their clothes, and by other means intimating an intensity of sorrow (which it is almost needless to say they can not feel) for the loss their employers have sustained. The practice of hiring public mourning women on such occasions appears to be of great antiquity.

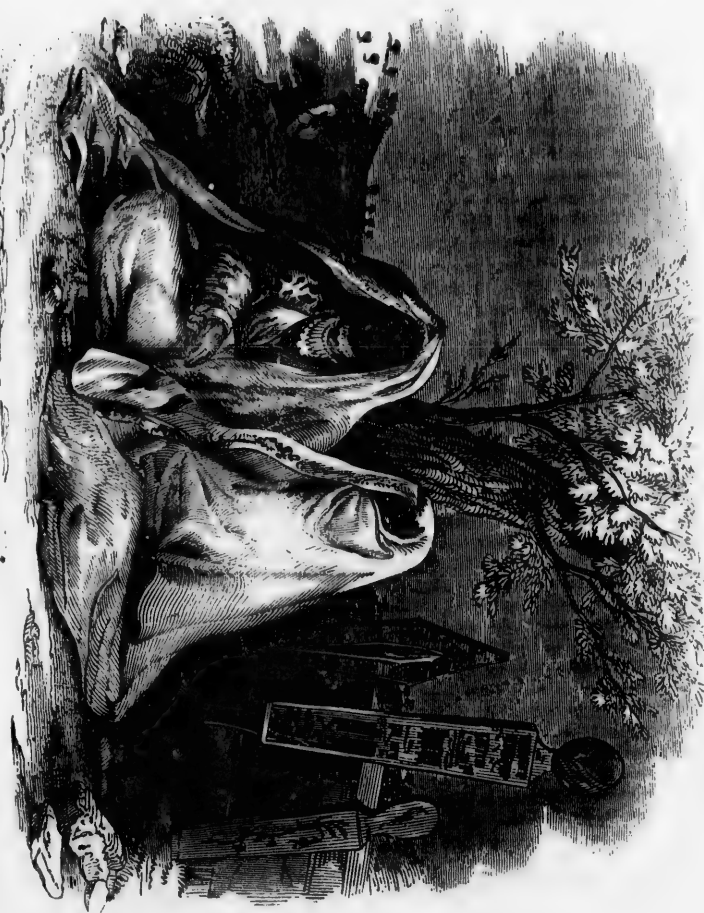
The root of this rather singular though very prevalent custom seems to be, that the Eastern nations require manifestations of strong feeling to be marked, palpable, and exaggerated. Hence their emotions, particularly those of grief, have a most violent and loud expression; and, still unsatisfied, and apprehensive that their own spontaneous manifestations of sorrow, when a death occurred, were inadequate to the occasion, and rendered insufficient honor to the dead, they thought of employing practised women to add their effective and manifest tributes of apparent grief. Thus mourning became an art, which de-

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EW oriental customs appear so strange to the traveller, as the rites and ceremonies performed in eastern countries on the decease of a Moslem. On the occasion of a death, in the east, the mother, wives, and daughters, enter into the most violent wailing out, "O, my mis-er-able house! O, my mis-er-able house!" which they are often joined by the neighbors, and the house of mourning and wailing. Their grief may be expressed with as much violence as possible, there are some who make it their business to attend on the mourning for the dead, and to receive on all such occasions a consideration; depending on their livelihood. In all Moslem cities there may be hired to attend on the mourning in behalf of their friend, which is the most violent gesticulation, rending their hair, and means intimating an intense sorrow (which it is almost impossible for them to feel) for the loss they have sustained. The public mourning women appear to be of great

rather singular though custom seems to be, that they require manifestations of grief to be marked, palpable. Hence their emotions, of grief, have a most expressive expression; and, still un-derstanding that their own manifestations of sorrow, were inadequate and rendered insufficient, they thought of employing men to add their effective gestures of apparent grief. This became an art, which de-

Mourning Women of the East.



volved on women of shrill voices, copious of tears, and skilful in lamenting and praising the dead in mournful songs and eulogies. When a person in a family died, it was customary for the female relatives to seat themselves upon the ground in a separate apartment, in a circle, in the centre of which sat the wife, daughter, or other nearest relative, and thus, assisted by the mourning women, conducted their loud and piercing lamentations. At intervals, the mourning women took the leading part, on a signal from the chief mourner; and then the real mourners remained comparatively silent, but attested their grief by sobs, by beating their faces, tearing their hair, and sometimes wounding their persons with their nails, joining also aloud in the lamenting chorus of the hired mourners. The family of the deceased generally send for two or more *Neddábehs* (or public wailing women); but some persons disapprove of this custom, and many, to avoid unnecessary expense, do not conform to it. Each *neddábeh* brings with her a *tár* (or tambourine), which is without the tinkling plates of metal that are attached to the hoops of the common *tár*. The *neddábehs* beating their *társ*, exclaim several times, "Alas for him!" and praise his turban, his handsome person, &c.; and the female relations, domestics, and friends of the deceased (with their tresses dishevelled, and sometimes with rent clothes), beating their own faces, cry in like manner, "Alas for him!" This wailing is generally continued at least an hour. It is of course resumed at intervals. The details vary in different parts of the east, and in some places the musicians form a separate body, as they did among the Hebrews.

"The custom of employing hired mourners was also in use among the Greeks and Romans, who probably borrowed it from the east. Some of the Roman usages may contribute to illustrate those of scripture. When a person expired whom his relatives or friends wished to honor by every external testimony of grief, some mourners were called, who were stationed at the door, and who, being instructed in the leading circumstances of the life of the deceased, composed and chanted eulogies having some reference to these circumstan-

ces, but in which flattery was by no means spared. Then, when the time arrived for the body to be carried to the funeral pile, a choir of hired mourners attended, who by their bare breasts, which they often smote, their dishevelled hair, and their mournful chants and profuse tears, moved, or sought to move, the minds of the spectators in favor of the deceased, and to compassion for his bereaved friends, whose respect for his memory their own presence indeed indicated. These women were under the direction of one who bore the title *prafica*, who regulated the time and tone of their lamentations. They were attired in the black robe of mourning and affliction, called by the Romans *pulla*. It should be observed that, as intimated by the prophet Jeremiah, a principal object of the displays of the hired mourners was to rouse the sorrow of the bereaved relatives, maintaining the excitement of affliction by enumerating the virtues and qualities of the deceased, as well as, by the same means, to excite the sympathising lamentations of those not immediately interested in the event.

The scene represented in the engraving is a Turkish cemetery, to which the immediate female relatives pay daily visits to the grave for some days after the interment; but in cases of unavoidable absence their places are also supplied here by the hired mourning women.

COURTESY.



Do not hesitate to claim for courtesy, as Doctor Johnson did for cleanliness, a place among the virtues. It is a virtue, and one which greatly promotes the comfort and happiness of mankind. It is the sugar in the cup of life—the sweetener of domestic and social existence. The very name of this grace is so associated with the stiff, frigid, and in some instances, ludicrous forms of etiquette, that we are apt to over-

look its worth, and have inadequate ideas of its importance. These forms, unless they be all the more extravagant, are by no means to be neglected; but it should not be forgotten that they are often punctiliously observed by persons who do not know what real politeness is—in whose minds the sentiments that create true courtesy have no place.

To be courteous in the best sense, we must have an humble estimate of ourselves and our attainments. Excessive vanity and true politeness will not be found together. When you meet with a person who is on the very best terms with himself, and has a most extravagant idea of his own importance, you need not expect to receive very courteous or respectful treatment from him. It can scarcely have escaped the notice of the least observing, that the artificial manners current in society are constructed in deference to the sentiment of humility. "The tendency of pride," says one of the greatest and best of men, "to produce strife and hatred, is sufficiently apparent from the pains men have been at to construct a system of politeness, which is nothing more than a sort of mimic humility, in which the sentiments of an offensive self-estimation are so far disguised and suppressed as to make them compatible with the spirit of society; such a mode of behavior as would naturally result from an attention to the apostolic injunction, 'Let nothing be done through strife or vain glory; but in lowliness of mind let each esteem other better than themselves.'" And if even the hollow forms of this virtue be so important that we can not dispense with them, how much more valuable must the reality be; if the painting be both useful and pleasing, how excellent and charming the original! Humility, then, it should be kept in mind, is essential to genuine courtesy. The really humble individual will not usurp a place to which he has no claim. He will be content with his own share, or rather less, in conversation. Even when conscious of being in the right, he will not express his convictions in that rude and boisterous tone, which creates disgust both at the speaker and what he says; he will not state his views as if they were so many self-evident axioms, reminding wise and

sensible listeners of the taunt of a venerable scripture worthy, "No doubt but ye are the people, and wisdom shall die with you." He will beware of exalting himself above others; of hinting even indirectly their inferiority to him. He will not take the faults and misfortunes of others as incense to his own vanity—a practice which, though common, is mean and despicable. It is easy to see how an humble opinion of one's self will thus promote genuine politeness.

Affectionateness is another of its essential prerequisites. To be pleasingly well-bred, we must have a regard for those with whom we mingle; for its absence no artificial deference will compensate. The great desire of every person when he goes into society, should be to contribute as largely as possible to the general fund of happiness—to impart as well as receive pleasure. Good will toward all with whom we feel it right to associate, must shine through the countenance, flow from the tongue, be conveyed in the cordial grasp of the hand: and in a thousand ways, easier felt than described, be made apparent. Why should we blush to confess that we have a kindly feeling toward our fellow-creatures? Why seek to hide the sympathies that are so honorable to us? Why not circulate as widely as we can, those feelings of brotherhood which are of such advantage to our race? There are some, indeed, who have so degraded themselves that they may be thought hardly entitled to affection. But even when called to mix with such persons, we should remember that kindness has a killing power, and that the best way to make a man respect himself, is to show that others still would fain respect him, would he but act so as to enable them to do so. Affectionateness is indispensable to that kind of politeness which a man with a heart relishes. There is no mistaking cold artificial manners for the genuine courtesy of the heart. Persons with the gloomy and scowling look—the harsh, querulous, and domineering tone—on whose brows you can trace the clouds of the quarrel that was just hushed up as you crossed their threshold, never can be courteous in the best sense of that term. There is no good society, no circle worth spending an hour

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A scrupulous and delicate regard to the feelings of others, is also an essential ingredient in the character of a well-bred person. The most guarded, indeed, may occasionally trespass through ignorance or inattention, but they who do so designedly, violate the first law of correct manners, which is to make all around us feel as easy and cheerful as possible. There are some persons so sensitive and touchy on almost every topic, whose sensitiveness, too, arises from their overweening self-conceit, that one can scarcely be expected so to shape his speech as not to give them offence; while there are those who have so little regard for the feelings of others, that we almost feel it a duty, when an opportunity occurs, to lend them a pretty hard blow in return. We quite agree with the sentiment of one of the greatest of moralists—"They who can not take a jest, ought not to make one." These exceptions apart, however, there is such a thing as wantonly tampering with the feelings of those with whom we mingle, which is one of the grossest outrages upon good breeding. If the gentle Cowper was right when he said that he would not enter upon the list of his friends, the man who would heedlessly set foot upon a worm, what are we to say of those who intentionally would crush or wound that sensitive, and sprightly, and loving thing, the human heart? They should be sent to herd alone. They are the kind of natures whom one would be glad to see betake themselves to the cloister or the cave; they are among the nuisances of the social circle, the banes of domestic life. Higher motives apart, self-love should prevent such conduct. Who is altogether invulnerable? Is not that individual singularly fortunate—the rare exception—who has nothing in his personal appearance, habits, vocation, past history, present condition, or connexions, and the like, fitted, when an uncourteous and unfeeling allusion is made to it, to stir a sigh, or kindle a blush? And every man is aware when such allusions in his own case would be felt cruel, and he should not forget to act toward his neighbor on the golden max-

im, "Do unto others as you would have others do unto you."

A prying and inquisitive disposition, too, is incompatible with true politeness. Impertinent curiosity is one of the chief banes of social intercourse. It is easy to see how it becomes so. You put a question respecting circumstances which you have no right to know anything about, and which common sense might tell you the party you interrogate is not willing to disclose. The latter must either equivocate, or directly falsify, or, much to the annoyance of his own feelings, state distinctly that the question is one you have no right to put, and which, therefore, he does not mean to answer. So that if to preserve tranquillity of mind, to impart as well as to receive pleasure, be the object of good manners, every Paul Pry in the social circle must be a very offensive person indeed. We should keep a "sharp look out" on those whose conversation is chiefly in the question form.

True courtesy has other elements on which we do not enlarge at present. There is, for example, purity of conversation—that purity which teaches us to shun not merely open obscenity, but which is often as dangerous—covert insinuation. Then there is the propriety of feeling as much at ease as may be consistent with due respect to others. "Ease," Lord Chesterfield says, "is the standard of politeness." We must be courteous to those beneath our own roof, would we practise this virtue with grace in society. We may rest assured that politeness is a grace of no mean order. Some may affect to condemn it: it says the less for their sense, their taste, their virtue. That man has need of far more merit than falls to the share of ordinary mortals, who dares to act in contravention of the established forms and usages of society; and even the most accomplished in mind will be all the better that they be accomplished in manners too. It is a vulgar error that a man will scarcely be a *genius* and at the same time a *gentleman*.

THE moment of parting is the first moment that we feel how dear we are to each other. The reserves of the heart are broken, and the moved spirit speaks as it feels.

REAL GREATNESS.



He who possesses the divine powers of the soul, is a great being, be his place where it may. You may clothe him with rags, chain him to slavish tasks

—but he is still great. You may shut him out of your houses, but God opens to him heavenly mansions. He makes no show indeed in the streets of a splendid city, but a clear thought, a pure affection, a resolute act of a virtuous life, will have a dignity of quite another kind and far higher, than accumulation of brick and granite, of plaster and stucco, however cunningly put together, or though stretching far beyond our sight.—Nor is this all. Real greatness has nothing to do with a man's sphere. It does not lie in the magnitude of his own outward agency, in the extent of the effects which it produces. Perhaps the greatest men in our city, at this moment, are buried in obscurity. Grandeur of character is wholly in the force of thought, moral principle and love, and this may be found in the humblest condition of life. A man brought up to an obscure trade, and hemmed in by the wants of a growing family, may in this narrow sphere, perceive more clearly, discriminate more keenly, seize on the right means more decisively, and have more presence of mind in difficulty, than another who has accumulated vast stores of knowledge by laborious study, and he has more of intellectual greatness. Many a man who has gone but a few miles from home, understands human nature better, detects motives, and weighs character more sagaciously, than another who has traveled over the known world, and makes a name by his reports of different countries. It is the force of thought which measures intellectual, and so it is the force of principle that measures moral greatness, that highest of human endowments, that brightest manifesto of the divinity. The greatest man is he who chooses the right with invincible resolution, who resists the sore temptations from within and without, who

bears the most heavy burden, cheerfully, who is calmest in storms and most fearless under menace and frowns, whose reliance on truth, on virtue, on God, is most unfaltering—and is this a greatness which is apt to make a show, or which is more likely to abound in conspicuous stations?

THE BRIGHT SIDE OF HUMANITY.

THERE are good men everywhere. There are men who are good for goodness' sake. In obscurity, in retirement, beneath the shadow of ten thousand dwellings, scarcely known to the world, and never asked to be known, there are good men; in adversity, in poverty, and temptations, amid all the severity of earthly trials, there are good men, whose lives shed brightness upon the dark clouds that surround them. Be it true, if we must admit the sad truth, that many are wrong, and persist in being wrong; that many are false to every holy trust, and faithless toward every holy affection; that many are coldly selfish, and meanly sensual; yes, cold and dead to everything that is not wrapped up in their own little earthly interest, or more darkly wrapped up in the veil of fleshy appetites. Be it so: this is not all that we are obliged to believe. No: there are true hearts amid the throng of the false and the faithless. There are warm and generous hearts, which the cold atmosphere of surrounding selfishness never chills; and eyes unused to weep for personal sorrow, which often overflow with sympathy for the sorrows of others. Yes, there are good men and true men. God from on high doth bless them, and giveth his angels charge to keep them; and nowhere in the holy record are these words more precious or strong, than those in which it is written that God loveth the righteous ones. Such men are there. Let not their precious virtues be distrusted. As surely and as evidently as some men have obeyed the calls of ambition and pleasure, so surely and so evidently have other men obeyed the voice of conscience, and "chosen rather to suffer with the people of God, than to enjoy the pleasure of sin for a season." Why,

every meek man suffers in conflict keener far than the contest for honor and applause. And there are such men, who, amid injury and insult, and misconception, and the pointed finger, and the scornful lip of pride, stand firm in their integrity and allegiance to a loftier principle, and still their throbbing hearts in prayer, and hush them to the gentle motion of kindness and pity. Such witnesses there are even in this bad world: signs that a redeeming work is going forward amid its derelictions; proofs that it is not a world forsaken of heaven; pledges that it will not be forsaken; tokens that cheer and touch every good and thoughtful mind, beyond all other power of earth to penetrate and enkindle it.

DEATH OF GENERAL WOLFE.



N 1759 It was resolved by the British government to make a vigorous and effectual effort to conquer Canada from the French. Three expeditions were prepared which were all ultimately to unite. General Amherst was to march from New York, seize the forts of Ticonderoga and Crown point, and sailing along Lake Champlain, and down the Richelieu into the St. Lawrence, join General Wolfe, who by that time would have arrived before Quebec with a fleet and army. The third expedition was to take Fort Niagara; afterward, sailing across Lake Ontario and down the Cataraqui, take Montreal; and then, if necessary, co-operate with Amherst and Wolfe. The plan was a bold one, but liable to many interruptions which could not be foreseen, or at least prevented. Each armament succeeded, in spite of many difficulties, in accomplishing its separate objects; and as Wolfe was successful without the co-operation of the others, we may confine our attention to him alone. The fleet containing Wolfe and his army arrived at the island of Orleans with-

out obstruction. Montcalm, the French commander-in-chief, a brave officer, immediately encamped with a numerous army, composed of regular troops, militia, and Indians, along the shore, down to the banks of the Montmorenci, a river which literally falls into the St. Lawrence about seven miles below Quebec. He rightly judged that Wolfe would try to land below, not above the city. Meantime fire-ships were sent floating down the river, and nothing could have saved the English fleet and transports, if the sailors, with daring courage, had not boarded the burning vessels, and towing them on shore, left them to blaze away to the water's edge. The attempt was made twice, and each time failed in the same manner. Wolfe landed, and tried to cross the Montmorenci above the falls, in the face of the French army, but was driven back with a loss of 500 men and many brave officers.

The defeat mortified the young hero so severely as to bring on a fever, but though he was greatly reduced by his illness, his anxiety to retrieve his reverse doubtless strung his mind to that pitch of determination which enabled him to accomplish his object. The English took possession of Point Levi, opposite Quebec; and the fleet sailed past the city without damage. Montcalm deemed himself perfectly secure above the city, never imagining that Wolfe would effect a landing. He therefore only placed a numerous line of sentinels along the summit of the steep and rocky banks. Time was now becoming precious to Wolfe; it was the beginning of the month of September, and a Canadian winter was not far distant. After anxious searching, he selected a little indentation of the bank, rather more than a mile above the city, still called Wolfe's cave. Here he proposed to land the troops in silence and secrecy during the night, and making them clamber up a narrow path, that at present, though well-beaten, is difficult of ascent in broad daylight, to form them in order of battle on the table-land above, called the plains of Abraham. On the 13th of September, an hour after midnight, the first division of the troops landed, one of the first being Wolfe himself. "I scarcely think," he whispered to an officer near him, "that there

Montcalm, the French chief, a brave officer, immediately with a numerous army, regular troops, militia, and the shore, down to the Montmorenci, a river which flows to the St. Lawrence about twenty miles below Quebec. He rightly judged that the French would try to land below, and he sent a party of fire-ships down the river, and they were successful in burning the English fleet. The sailors, with daring and bravery, boarded the burning vessels, and, leaving them on shore, left them to the water's edge. The fire was made twice, and each time with the same manner. Wolfe landed to cross the Montmorenci in the face of the French, and was driven back with a loss of many brave officers. The death of the young hero so affected the French, that they brought on a fever, but though reduced by his illness, his courage and his reverse doubtless enabled him to accomplish what he wished. The English took possession of the city without damage. Wolfe seemed himself perfectly secure, never imagining that he would effect a landing. He therefore sent a numerous line of sentries to the summit of the steep and high ground. Time was now becoming late; it was the beginning of September, and a Canadian was not far distant. After consulting, he selected a little in the bank, rather more than a mile from the city, still called Wolfe's. He proposed to land the army by night and secrecy during the darkness, and making them clamber up a narrow path at present, though well-known, difficult of ascent in broad daylight. They were in order of battle on the morning above, called the plains of Abraham. On the 13th of September, at midnight, the first division of the army, one of the first being Wolfe, scarcely think," he whispered to an officer near him, "that there

Death of General Wolfe.—B. West



is any possibility of getting up, but you must do your endeavor." The Highlanders and light infantry scaled the path, dislodged a sergeant's guard at the top, and the news was carried to the astonished Montcalm, that the English were on the plains of Abraham.

He brought down his army, and the battle began about nine in the morning. Shortly after its commencement, Wolfe was shot in the wrist; he wrapped a handkerchief round it, and continued giving orders. Advancing at the head of the grenadiers, with their bayonets fixed, another shot entered his breast. He leaned upon an officer, who sat down for the purpose, and death was stealing over him. A cry of "They run, they run!" startled him: "Who run?" he asked with eagerness. "The French." "What! do they run already?—then I die happy." He expired almost immediately afterward.

Montcalm was mortally wounded by the only gun which the English had been able to drag up the heights: he died in Quebec next day. Quebec capitulated on the 17th; and the English fleet left the river, a strong garrison being placed in the city. During the winter the garrison suffered severely from the scurvy; and in the spring of 1760, the French came down from Montreal, and occupied the plains of Abraham. General Murray risked an engagement was defeated, and driven into Quebec. But for the opportune arrival of an English fleet in the river, the city might have been reoccupied by its original owners, and Wolfe's victory rendered what battles often are—a mere waste of human life.

All Canada surrendered in 1760, the inhabitants quietly taking the oath of allegiance to their conquerors, so that the province was not devastated by a prolonged resistance. It was ceded to Britain in full sovereignty by the treaty of Paris, in 1763.

To detract anything from another, and for one man to multiply his own conveniences by the inconveniences of another, is more against nature than death, than poverty, than pain, and the rest of external accidents.

EMULATION.



EMULATION, taken in its restricted and exact sense, may be defined as that principle by which we are incited to cope with others whose path of exertion runs parallel to our own.

There are two affections of the mind partially resembling this, from both of which it is of consequence to distinguish it. Ambition and envy are certainly to be viewed as two varieties of the same general tendency. The aim of the former exceeds that of emulation. There is embraced in it, as a co-element with the desire of distinction, an avidity of power. The ambitious man will not be satisfied with quiescent and contemplative superiority; his ultimate and proper object—an object the losing sight of which would denude him of the quality in question—is the vigorous and continued assertion of his anticipated ascendancy. The aim of emulation is praise, that of ambition is power. A mind under the influence of the one feeling looks beyond the contest to the *otium cum dignitate*, the blended distinction and repose in which it is expected to issue; a mind actuated by the other only contemplates the struggle as introductory to the toils of a higher sphere. Of the insignia of success, those of emulation are the robe and the crown, those of ambition the sword and the sceptre.

If a difference is thus perceptible between two emotions, each of which, though vicious in excess, is essentially good and praiseworthy, that, surely, subsisting between either and a third essentially evil and reprehensible, although in one aspect resembling the others, can not be difficult of detection. To dilate on the distinction between envy and ambition is foreign to our present design. Perhaps the latter of these dispositions is at a still more appreciable remove from the former than emulation is, the purely benevolent feelings being more decidedly implied in the right exercise of power, than in the mere possession of superiority. Our present

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EMULATION, taken in its restricted and exact sense, may be defined as that principle by which we are incited to cope with others whose path of exertion runs parallel to our own. Sections of the mind parallel to this, from both of which we are to distinguish it. Envy are certainly to be distinguished from the varieties of the same genus. The aim of the former is emulation. There is an element with the desire, an avidity of power. Envy will not be satisfied and contemplative superiority and proper object—giving sight of which would be a quality in question—is continued assertion of his superiority. The aim of emulation is ambition is power. The influence of the one is to lead the contest to the other, the blended distinction which it is expected to be created by the other only struggle as introductory to a higher sphere. Of the two, those of emulation are more noble, those of ambition are more sordid.

It is thus perceptible between the two, each of which, though they are essentially good and bad, are surely, subsisting because a third essentially evil exists, although in one aspect only. Envy, can not be difficult to dilate on the distinction between the two. Ambition is foreign to the former. Perhaps the latter of the two is at a still more apparent distance from the former than the former is from the latter. Purely benevolent feelings are decidedly implied in the former, than in the mere emulation. Our present

plan, however, only requires us to distinguish emulation from envy.

The line of demarcation is bold and broad. Envy, we have said, is in its own nature an evil affection; emulation, existing in proper measure, a good. The one has been habitually present to the bosoms of the best and most illustrious of the human race, and we have strong grounds for concluding that it is common with ours to superior natures; the other is the characteristic of the vicious and depraved among men, and if harbored by an angel would transform him into a fiend. Emulation springs from a due regard to our own character and position, a wish for such advancement in any pursuit as may procure for us the approval of our own consciences, and also the esteem and good offices of our fellows; envy is a state of mind usually resulting from culpable inferiority, in which the depression or downfall of a competitor is the one thing contemplated and desired. "A man," says Lord Bacon, "that hath no virtue in himself ever envieth virtue in others, for men's minds will either feed upon their own good or upon others' evil; and who wanteth the one will play upon the other, and whoso is out of hope to attain another's virtue, will seek to come at even hand by depressing another's fortune." The one feeling is a just and proper mode of self-love; the other is a wicked perversion of that law of our being, making evil its good, turning the successes of other men into gall and bitterness to the solitary malcontent, and their misfortunes into the subject of his gratulation. The one is opposed to sloth and insensibility; the other is the antithesis of benevolence. Emulation employs no means to gain its object but such as are open and honorable: envy will stoop to the meanest and the guiltiest. The former disposition involves a specific regard to our own interests—a wish to enjoy the fruits of a well-earned preferment: the latter would often purchase injury to another by incurring injury to self. The one is virtuous self-love, with a tendency to expand to philanthropy; the other is vicious self-love, issuing, still more certainly, in the darkest malevolence.

We must be mindful, however, while

asserting these distinctions, that there are complex mental states in which any emotion may co-exist with others is an almost infinite variety of shade and of development. Indeed, as the score of letters that make up the alphabet may be grouped into millions of different words, or as the half-dozen pieces of stained glass in a kaleidoscope form endless combinations of colors, so the human mind, though endowed originally with few separate principles of thought or of action, possesses, both from the agency of external impulses and from the reciprocal influence of its own faculties, an inconceivable range of diversified consciousness. It is seldom, if ever, that any of our powers is operating singly. Several are generally employed in the formation of an idea or emotion, which will be each modified by the respective prominence of these while educating it. And thus it frequently happens, that in a state of mind which the decided preponderance of better views and motives may entitle to be regarded as the state of emulation, there is traceable a slight infusion of malevolent feeling, the presence of which in larger proportion would constitute the emotion *envious*. Indeed virtue, as connected with this part of our constitution, seems rather to consist in the immediate repression of those evil affections into which, in particular, disappointed emulation may degenerate, than in the attempt to escape all liability to their incipient growth. The wise purposes of the moral government of God may render it necessary that the root of bitterness remain in the soil; our duty being to watch and to check the least symptom of development.

We wish to notice the influence, in the first instance, of natural temperament, and, in the second, of education, in modifying the susceptibility we speak of.

In natural temperament there is among mankind an extreme diversity. Some, endowed with acuteness of apprehension, and a peculiar proneness to the exercise of the affections, act with ardor, with constancy, and with feeling. Other minds there are, again, of dull, phlegmatic mould—nature's Dutchmen—constitutionally indifferent to a thousand matters that would excite the emotions and determine the

measures of the more susceptible sort. A third class, and that by far the largest, seem to unite, in some sort, the distinguishing attributes of both the others, exhibiting toward objects apparently alike calculated in themselves to engage their regard, alternately the most lively interest and the most profound indifference. We do not contemplate in this distribution the bent which the mind may acquire from causes extraneous to itself—the influence of circumstances in repressing certain natural tendencies, in fostering others, and in modifying all. Our observations are directed exclusively to native temperament, to original, innate susceptibilities. And their correctness, with this restriction, is quite apparent. We may continually remark in children the *fathers of the men*, the difference alleged manifested most unequivocally long before circumstances have room to operate in producing it; or where there is no mutual adaptation between these and the dispositions that are evolving. Nay, do not we frequently witness the development of peculiar dispositions in spite of the action of circumstances directly hostile, the former changing not changed by the latter? And whether these be simply neutral or positively adverse, there is necessitated in both cases the supposition of an *independent cause*, in one that of a *counter-cause* more potent than its antagonist within the mind itself; in other words, there is established a natural diversity in temperament. This is an ultimate fact in our constitution. Now the fact relates to the existence of an agency which may effect the principle of emulation, in common with all the active powers, in two modes; first, in the way of determining its force, and, secondly, in the way of indicating its objects. If the temperament of an individual is quick and sensitive, emulation will be vividly present to his mind, and will form a very powerful incentive to exertion; if that temperament be, on the contrary, sluggish and inert, this emotion will be but seldom felt, and, when felt, but feebly. Emulation, again, may be largely swayed by temperament as respects the choice of its objects. When the animal principles of our nature are predominant, these will produce low and debasing aims. When

the individual is the victim of inordinate vanity, there will be a similar perversion of the feeling to aims that are puny and ridiculous. It is only when a man, in the exercise of reason and conscience, and informed and stimulated by an influence from above, has succeeded in correcting what is wrong, and in confirming what is right in the original bent of his mind; in reclaiming his affections from unworthy objects, and in fixing them on such as are noble and virtuous—it is then only that this excellent faculty is seen in its true aspect, operating in its proper sphere, and accomplishing the high ends for which it was imparted.

We are not, however, to suppose that temperament only directs the capacity of emulation to objects *as morally good or as morally evil*. It often communicates what we may style, in contradistinction, an innocent variety of aim. One man, for example, whose love of knowledge is naturally ardent, will be ambitious to distance his competitors in the walks of learning; another, in whom the desire of gain is strong, will aspire to influence in the mercantile community; while a third, in whom the love of country is the ruling passion, will aim at the reputation of a distinguished patriot. Emulation, which may be called an *adjective emotion*, supposing and dependent on the concurrent action of some other of the emotions, falls, in these and the like instances, into the channel which original temperament has dug for it, and flows in that beneficially. The sentiment, while susceptible of vicious, is equally susceptible of virtuous variety of direction. Bacon writing the *Novum Organon*, Galileo scanning the stars, Milton musing on *Paradise Lost*, Newton establishing the theory of gravitation, Harvey ascertaining the circulation of the blood—are all most illustrious instances of the truth of this position.

Emulation, however, may be materially modified by education—an influence, indeed, decreasing in strength in exact proportion to the markedness and decision of natural temperament, yet, from the absence of these characteristics in the mass of minds, more extensively potent than the other. We use the term *education* in its widest sense, intending by it not the bare

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If they be good, the young mind will be
instructed as to the legitimate objects of
the emotion, and the temper in which they
ought to be prosecuted. How powerfully
each order of agencies acts we have in-
numerable proofs. If, to take an illustra-
tion from a well-known passage in ancient
history, the love of fame co-operated in
the mind of Brutus with the love of coun-
try, to determine him on the sacrifice of
his offspring:—

"Vincet amor patriæ, laudamque immensa cupido,"
how must the principle of emulation have
been warped and perverted by the sublime-
ly barbarous notions of the nation and the
time! And it was probably the false light
in which he had been taught to contem-
plate the deed of his progenitor, that led
the younger Brutus to the perpetration of
a crime almost equally repugnant to un-
sophisticated nature, the assassination of
his benefactor and his friend. To take
instances of a class—the prize-fighter who
vaunts his brutal strength and brutal sci-
ence as superior to those of his brother
boxers; the miss whose desire is fulfilled
if she can flaunt in gayer silks than the
other girls of the neighborhood, and be
seen hanging on the arm of a more buck-
ish admirer—are examples from each of
the sexes of the vast influence exerted by
early training in lowering the sentiment
of emulation. But this influence, as that
of temperament, is not all on one side.
By imbuing the heart of youth with the
best principles, and storing its intellect
with the choicest knowledge; by placing
constantly before it the noblest models of
genius and virtue, that it may drink in their
spirit, and look itself into their likeness;
by surrounding it with circumstances cal-
culated to foster its aspirations and invigor-
ate its efforts after excellence, and re-
moving such as clog or cramp these—

"Repress its noble rage,
And freeze the genial current of the soul,"

by lenient censure of its defects, and
liberal praise of its successes; by such
means as these we shall enlist this noble
susceptibility in the cause of goodness,
and give it a direction the happiest in its re-
sults alike to the individual and mankind.

We can not conclude without a brief
notice of the evidence deducible from this
part of our constitution of the benevolence
of the Deity. This quality is strikingly
displayed, first, in the implanting the af-
fection we have been considering, and,
secondly, in the provision for its diversified
direction. In emulation we have the chief
primary incentive to the acquisition of
knowledge. The wish to be informed
would lose much of its vividness, if igno-
rance were no longer regarded as shame-
ful. It is the principle we have been con-
sidering that gives the original impulse to
enter on the paths of literature and science
—paths that at first are thorny and repul-
sive, and that only appear charming as we
proceed. Literature and science have in-
deed inherent attractions amply sufficient
to detain the initiated, but emulation it is
that must attract to them the novice. It
is this that prevents his becoming dis-
heartened by the difficulties with which
he must struggle in the pursuit of knowl-
edge; that nerves him for the tedious and
difficult ascent of

"The steep where fame's proud temple shines afar."

Divest man of this capacity, and the fresh-
ness and buoyancy of his being are gone
with it. The choicest of the pleasures of
hope and of taste, being those dependent
on emulation, are annihilated. Society
stagnates, learning is neglected, and life be-
comes a dull, because an *objectless* routine.

Nor is the goodness of God less con-
spicuous in providing for this faculty such
diversity of aim. The constitution of the
world, and the condition of man, necessi-
tated its exercise toward a variety of ob-
jects. The all-wise and merciful Creator
has, therefore, seen fit to implant in differ-
ent minds certain native tendencies and
preferences, by virtue of which they are
induced to enter on different courses of
useful exertion. By this arrangement
there is secured at once a large amount of
distinction to individuals, and an increase
of general advantage to society.

PERICLES.



HE birth of Pericles appears to have taken place a little later than the year 500 before Christ. He was descended of the noblest blood of Athens, but was inferior in wealth to many among his contemporaries. At an early age he showed signs of great abilities. His education was conducted by the ablest teachers of the usual accomplishments; and, in addition, he exercised and sharpened his mental powers by diligent and eager study of the deepest speculations of the Greek philosophers. His infancy and boyhood witnessed the stirring events of the Persian war, and the rapid growth of Athens in wealth and dominion. Such events, with the brilliant career laid open to his distinguished countrymen and predecessors, Themistocles and others, were highly calculated to fan and nourish the ambition of a powerful mind; and even in youth he seems to have formed his character and carriage upon the model becoming a statesman. He early attracted notice, not only by his sweetness of voice, fluency of language, and dignified beauty of person, which reminded the aged of the usurper Pisistratus, but also by the gravity of his demeanor and decorum of his conduct. From his first entrance into public life, he devoted himself with unremitting application to business; he was never to be seen out of doors but on the way between his house and the seat of council; he declined all invitations to the entertainments of his acquaintance, and confined himself to the society of a very select circle of intimate friends. He bestowed the most assiduous attention on the preparation of his speeches; and so little disguised it, that he used to say he never mounted the platform without praying that no inappropriate word might drop from his lips. The impression thus produced was heightened by the calm majesty of his air and carriage, and by the philosophical composure which he maintained under all provocations. And he was so careful to avoid the effect which familiarity might have on the people, that

he was sparing even in his attendance at the assembly, and, reserving his own appearance for great occasions, carried many of his measures through the agency of his friends and partisans.

After the disappearance of Aristides and Themistocles, Cimon succeeded to the direction of the state, and was, for his personal qualities, as well as for his birth and wealth, the recognised head of the aristocratic party. His talents as a general and politician were approved by a series of brilliant successes, and his character was well suited to acquire and retain popular favor; for he was affable, of easy access and convivial habits, and both by policy and temper liberal even to ostentation. His fortune, large by inheritance, was largely increased by the spoils of the war; and he made it contribute to his power by seasonable presents to the poor, by keeping open table for the division of citizens to which he belonged, by throwing open his private gardens and orchards to the public, constructing new walks for their recreation, and, in short, by every sort of popular largess.

Pericles first came forward in public life, B. C. 469. Cimon's frequent absence in military commands gave to the young aspirant a great advantage, which he improved by degrees, and before long became the acknowledged chief of a powerful party. On the other hand Cimon possessed a powerful engine in his immense wealth, which the more limited means of Pericles could not rival. To obviate this, Pericles became the author of a series of measures, bad, as it appears to us, in principle, and pernicious in their ultimate results, though not destitute of plausible grounds on which they might seem proper to the author, and on which they have been defended by favorable historians. We allude to those by which the revenue was diverted from the legitimate objects of all revenue—the payment of expenses of government, the execution of works of national utility, and, under moderate restrictions, national luxury and grandeur, and the relief of temporary and accidental distress—to provide shows and amusements, and to maintain a large proportion of the poorer class, almost in idleness, as pensioners on the state. It was probably

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Bust of Pericles.

with a view to the development of this policy, and to his own security in so doing, that he proposed and carried a law, by which the powers of the ancient and revered court of Areopagus, a body essentially aristocratic in its constitution, were greatly narrowed: among other things the control of the treasury was taken away from it, and vested in the assembly of the people. Events which overclouded for a time the favor and esteem in which Cimon was still held, enabled the democratic party to procure his banishment in 461, or, as some place it, two years later. Wars followed with the Bœotians and Spartans, in which the Athenians, on the whole, succeeded so ill, as to give the friends of Cimon a good opportunity of contrasting his glories with the ill success of the existing administration; and within five years of his banishment he was recalled, apparently with the full concurrence of Pericles. A sort of coalition between the most respectable and moderate of both parties was then formed; and until the death of Cimon, B. C. 449, party strife was almost at an end. Cimon, however, was too wise and temperate to satisfy a large section of his followers; and the attempts of the aristocratical party to gain the ascendancy were renewed, after his death, under the guidance of one Thucydides, not the historian of that name. He was an able man, well skilled in the art of managing a popular assembly; but he was striving in a cause seldom successful—to retard the spirit of the age. The contest was ended by his banishment in 444; and from that time till death, with a short interruption or two, the sway of Pericles over the minds and councils of the Athenians became little less than absolute.

A truce for thirty years, concluded with Sparta B. C. 445, left him at liberty to develop his domestic policy. This, setting aside the question how far, in framing that policy, he was actuated by personal motives, was directed, first, to extend and strengthen the Athenian empire; secondly, to raise the confidence and self-esteem of the Athenians themselves to a level with the lofty position which they occupied. At this time, those states which during the Persian war had entered into alliance

with Athens were reduced almost into the condition of subjects; and it was sought to increase the power of the leading state by converting her assumed authority into a still more absolute and recognised dominion. Before this time the contribution, originally levied by common consent, applied to common purposes, and kept in a common treasury in the sacred island of Delos, had been arbitrarily increased, and the place of deposit had been removed to Athens. The next step was to deny all responsibility as to the application of it; and to maintain the right of the Athenians, so long as they fulfilled the original object of its imposition, the protection of Greece against the common enemy, to dispose of the surplus after their own desire. The means thus placed at his disposal enabled Pericles, during the thirty years' truce, to carry still further that application of the public revenue, toward satisfying the wants and furnishing the amusements of the people, of which we have before spoken, and to execute those architectural wonders, which, even more than his military successes and political honors, have illustrated his name in all succeeding ages. The city and harbor of Piræus had been fortified by Themistocles; the long walls, which connected the city and the harbor, had been built by Cimon on a scale which defied such means of assault as the military science of the day could bring against them. Thus Athens, secure against danger by land, and sure of access to the sea, enjoyed the advantages of an island. It was now that the Acropolis was covered with those magnificent and lasting edifices, which even to this day would scarce have shown the injuries of time, if man had spared them. A splendid fortified portal, called the Propylæa, at once guarded and ornamented the sacred precinct, in the middle of which, among other buildings of lesser note, rose the Parthenon, or temple of Minerva, constructed of the purest and most brilliant marble, and adorned within and without by the richest sculptures, designed by Phidias, the Homer of Grecian art. The splendid porticoes which ran all round it were lined with the friezes and metopes which form the bulk of the Elgin marbles in the British Museum;

and the pediments at either end were filled with groups of statues, which, mutilated as they are, are acknowledged to be second to none among the masterpieces of antiquity. They were richly ornamented with gold, and relieved, a practice not familiar to modern taste, with the most brilliant colors. Within was the statue of the goddess, of colossal size, and of the most costly materials, ivory profusely ornamented with gold.

While Pericles was thus laboring to render Athens the focus of attraction to Greece, his own house, though he abstained from indiscriminate visiting and convivial entertainments, was the resort of the most eminent teachers of philosophy and literature. We can not here pass silently over his connexion with the celebrated Aspasia, a favorite subject of allusion and ridicule with the scandal-mongers and satirists of the day. She was a Milesian, of great beauty and talent, educated far above the usual level of the sex in Greece, with the view of making a profitable market of her accomplishments. Her condition in this respect is not to be judged according to the refinement of modern manners, still less by the pure rules of Christian morality. The fascination of her person, manners, and conversation, won for her the enduring love of Pericles, who in her behalf divorced his wife, and placed her at the head of his household: a legal marriage he was unable to contract with her. She was his constant companion, the partner of his counsels, and his adviser; she engaged in equal terms in the most abstruse discussions of the philosophers whom Pericles loved to assemble at his house; and her reputation for eloquence was such that, in one of the dialogues of Plato, Socrates represents himself as her pupil, with the intimation that she "had made many good orators, and Pericles among the number." Indeed her influence over the great statesman afforded matter for continual attacks to the comic poets, such as calling them the Jupiter and Juno, the Hercules and Omphale of Athens. It also gave ground occasionally to more serious charges; for men boldly asserted, that to gratify her personal animosities, he had engaged his country in the wars against Samos and Megara.

And though the influence of Pericles was too deeply rooted for his enemies to venture on a direct attack, it is clear that they were numerous and powerful, from the success with which they aimed an indirect blow at both his happiness and his reputation, by assailing some of his most intimate friends. The freedom of discussion and speculative turn of conversation encouraged at his house, where many of the speakers treated the received religion of Greece with very light respect, furnished ground for a criminal prosecution against his former preceptor and most intimate friend, Anaxagoras, the issue of which is not altogether clear: it appears however that the philosopher found it either necessary or expedient to retire from Athens for the remainder of his life. Aspasia was involved in the same charge of impiety, coupled with a grosser and more degrading accusation; and owed her deliverance to the great personal exertions of Pericles, who condescended on this occasion to use even tears and personal entreaties to work upon the judges in her behalf. These prosecutions took place just before the outbreak of the Peloponnesian war: the storm however soon blew over, and his power and reputation stood as high as ever during the remainder of his life, with the exception that a charge of peculation was brought against him; but the historian Thucydides, a contemporary of the highest veracity, and no friend to Pericles, has testified to his integrity in the strongest terms. The extent of his influence is most remarkably shown by one measure which he persuaded the Athenians to adopt. This was no less than a transfer of the whole population of Attica with all their moveables to the space included within the walls of the city and its ports, abandoning the country, without resistance, to the invasion of the enemy. His grounds for this were, the inexpediency of risking the limited body of Athenian citizens in pitched battles against the Peloponnesian armies, which were superior both in number and reputation, and even if defeated, might be recruited to any amount; and on the other hand, the superiority of the Athenians at sea, which enabled them to draw inexhaustible supplies of all things needful

from their subjects and trading connexions, and the strength of their city, which defied such methods of assault as military skill had yet invented. These advantages, and their abundant revenue, would enable them at pleasure to protract the war; while the funds of the Peloponnesians, who derived little profit from trade and colonies, were not likely to last through an expensive struggle. And he warned them not to seek new conquests, but to content themselves with defending what they already enjoyed.

The event proved the justice of his views in all respects. The first invasion of Attica took place B. C. 431. Though the people had reluctantly assented to his policy, and removed into the city, yet the spectacle of their country ravaged by an insulting enemy tried their patience severely, and they demanded with loud and bitter reproaches to be led into the action. Pericles remained unmoved, and would neither lead an army to the field nor summon an assembly to deliberate on the subject. Trees, he said, when cut down might shoot up again, but men were not so easily replaced. But he provided a vent for the active spirit of the people, by sending various expeditions to ravage the seacoast of the enemy's country. At the close of the campaign the usual tribute of funeral honors to those who had fallen in battle was celebrated; a circumstance here mentioned because Pericles pronounced the funeral oration on this occasion, and in the want of any genuine specimen of his eloquence the speech attributed to him by Thucydides, becomes doubly interesting as being very possibly a pretty faithful report as to the topics which Pericles employed on the occasion, and an imitation of his style.

The second year of the war was more calamitous. In the course of it the celebrated plague of Athens broke out. The general misery produced by this fearful visitation emboldened the enemies of Pericles to institute a prosecution, in consequence of which he was deprived of his military command, and heavily fined. In the following year he recovered both his office and his ascendancy over the people. But in the summer B. C. 429, he was himself carried off by a lingering illness,

having already lost by the pestilence his two legitimate sons, his sister, and the most valued of his friends. The death of his younger son, a very promising youth, appears to have cut him to the heart. He placed the funeral garland on the head of the corpse, according to custom, but in doing so—a most unusual mark of emotion—he burst into tears. When he was near his end, and apparently insensible, his friends, gathered round his bed, relieved their sorrow by recalling the remembrance of his military exploits, and of the trophies which he had raised. He interrupted them, and observed that they had omitted the most glorious praise which he could claim. "Other generals had been as fortunate, but he had never caused an Athenian to put on mourning;" a singular ground of satisfaction, notwithstanding the caution (herein alluded to) of his military career, if he had been conscious of having involved his country in the bloodiest war it had ever waged. His death was a loss which Athens could not repair. Many were eager to step into his place; but there was no man able to fill it; and the fragments of his power were snatched by unworthy hands. He died when the caution on which he valued himself was more than ever needed to guard Athens from fatal errors; and when the humanity which breathes through his dying boast might have saved her from her deepest disgrace.

LENGTH OF DAYS.

At Berlin and London the longest day has sixteen and a half hours. At Stockholm and Upsal, the longest has eighteen and a half hours, and the shortest five and a half. At Hamburg, Dantzic, and Stettin, the longest day has seventeen hours, and the shortest seven. At St. Petersburg and Tobolsk, the longest has nineteen, and the shortest five hours. At Torneo, in Finland, the longest day has twenty-one hours and a half, and the shortest two and a half. At Waudorbus, in Norway, the day lasts from the 21st of May to the 22d of July, without interruption; and in Spitzbergen the longest day lasts three months and a half.

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Portrait of William Pitt, Lord Chatham.

LORD CHATHAM.



WILLIAM PITT, usually distinguished as the *great* Lord Chatham, was born at London in the year 1708, and was the son of Robert Pitt, Esq., of Boconnoc in Cornwall. He was educated first at Eton and afterward at Trinity college, Oxford, of which he was entered a gentleman commoner in 1726. On leaving the university he purchased a cornetcy in the Blues ; but urged probably by the desire of obtaining a more suitable field for the display of his abilities than a military life afforded, in 1735 he procured himself to be returned to parliament for the family borough of Old Sarum. Sir Robert Walpole was then at the head of affairs ; and Pitt immediately joined the opposition, which eventually compelled that minister to retire in 1742. For the part which he thus took, he was, the year

after he entered parliament, deprived by Walpole of his commission, but was compensated by being made one of the gentlemen of the bedchamber to the prince of Wales. His eloquence, as soon as he began to take a part in the debates, raised him to distinction and importance ; and imperfectly as the proceedings of the house were then communicated to the public, his reputation as one of the most powerful speakers of the day seems to have rapidly spread itself over the nation. It was in 1740, in the course of his contest with Walpole's administration, that on a motion relating to impressment, he made his famous reply to Mr. Horatio Walpole, the brother of the minister, vindicating himself from the double charge of youth and theatrical elocution. Walpole's administration was succeeded by that of Lord Carteret (afterward the earl of Granville), but this change did not introduce Pitt to office. The celebrated Sarah, dutchess of Marlborough, however, left him in 1744 a legacy of £10,000, in reward, as it was expressed in the will, of the noble disin-

terestedness with which he had maintained the authority of the laws, and prevented the ruin of his country. The following year he resigned his post in the household of the prince. In 1746, under the premiership of the duke of Newcastle, Mr. Pitt was for the first time chosen to fill a place in the government, being appointed to the office of vice-treasurer for Ireland, from which he was transferred the same year to that of paymaster-general of the forces. In this situation, which he held for nearly nine years, he displayed his characteristic activity, energy, and decision, and the most high-minded integrity and contempt for many of the customary profits of office. In 1755, however, on a disagreement with the majority of his colleagues, he resigned: but, in little more than a year after, the force of public opinion compelled his recall; and on the 4th of December, 1756, he was appointed principal secretary of state. In the April following, finding his views still thwarted by the rest of the cabinet, he again retired; but within less than three months the king was obliged to yield to the national voice, the ministry was driven from power, and a new one was formed under the auspices of Pitt, who, reinstated in his former place of secretary of state, now exercised under that name the authority of premier. For the next four years Pitt may be regarded as having been the director of the energies of England; and they are four of the most glorious years in the history of the country. Victory crowned the British arms wherever they appeared, whether on sea or on land; the French were beaten at almost every point both in the east and in the west; the vast territory of Canada was wrested from them, almost before the government at home was aware that it was in danger; and they were eventually stripped of nearly all their other colonies in every part of the world. Along with these successes abroad, tranquillity and contentment at home no less remarkably distinguished the supremacy of this able, patriotic, and popular minister. In October, 1760, George II. died, and the ascendancy of new principles which the new reign brought along with it, before long compelled Pitt to tender his resignation of his services. His ad-

ministration terminated, and that of Lord Bute commenced in October, 1761. Although Pitt, however, had found it necessary to retire from the management of affairs, his sovereign was so sensible of his great deserts, that a barony was bestowed upon his lady, and a pension of three thousand a year granted to him for their conjoint lives and for that of his eldest son. After this, he remained out of office till 1766, when, after the failure of the Rockingham administration, it was found necessary in the embarrassed state of public affairs, occasioned by the first troubles respecting the American stamp act, again to call for the assistance of the man who was generally believed best able to serve the country; and in July that year he was intrusted with the formation of a new cabinet. In the arrangement which he made upon this occasion he reserved to himself along with the premiership the office of lord privy-seal, as better suiting than one of more active duties, the enfeebled state of his health, now greatly broken down by attacks of the gout, to which he had long been subject. He also went to the upper house with the title of earl of Chatham. He now applied himself with his best endeavors to heal the differences with America; but the opposition of his colleagues rendered him unable to carry into effect the measures which he would have taken for this purpose; and, in December, 1768, he again resigned. Lord Chatham lived for nearly ten years after this; and, although his increasing infirmities compelled him to spend much of his time in retirement in the country, he frequently presented himself in his place in parliament, when important discussions were to take place, and never distinguished himself more than he did, on some of these occasions, by his eloquent and indignant appeals against the headlong course of misgovernment in which ministers were proceeding, and his maintenance of the constitutional rights and liberties of his countrymen. It was the contest with America, which called forth from Lord Chatham the most brilliant efforts of his latter days, and perhaps of his life. He may be said to have expired in resisting the infatuated measures which, in provoking this war, led to the dismemberment

of the empire. On the 7th of April, 1776, when a motion on this subject was to be discussed, he appeared for the last time in the house of lords, leaning on the arm of his son, with his majestic figure wrapped in flannels, and his face pale as death. After delivering his sentiments with his accustomed fervor, he sat down. On rising again, however, a short time afterward, to reply to some observations which had been made upon his address, he fell back in the arms of the duke of Cumberland and Lord Temple, who sat beside him, speechless, and to all appearance, insensible. Lord Chatham recovered so far as to be removed to his country-house at Hayes, where he lingered till the 12th of May, when he expired, entirely exhausted, in the seventieth year of his age. The characteristics of this celebrated minister were vigor, decision, a mind prophetic of consequences, and an eloquence so commanding that probably nothing quite equal to it has distinguished any other speaker in modern times. Judging rather by the effects which it is recorded to have produced, than by any pretended reports of particular speeches, it must have contained an extraordinary share of the vehemence and power by which Demosthenes, in ancient Greece, "wielded at will that fierce democracy."

GENERAL WASHINGTON.



NE pleasant evening, in the month of June, in the year 17— a man was observed entering the borders of a wood, near the Hudson river, his appearance that of a person above the common rank. The inhabitants of a country village would have dignified him with the title of 'squire, and from his manner pronounced him proud; but those more accustomed to society, would inform you there was something like a military air about him. His horse panted as if it had been hard pushed for some miles, yet, from

the owner's frequent stops to caress the patient animal, he could not be charged with want of humanity; but seemed to be actuated by some urgent necessity. The rider forsaking a good road for a by-path leading through the woods, indicated a desire to avoid the gaze of other travellers. He had not left the house where he inquired the direction of the above-mentioned path, more than two hours, before the quietude of the place was broken by the noise of distant thunder. He was soon after obliged to dismount, travelling becoming dangerous, as darkness concealed surrounding objects, except when the lightning's flash afforded him a momentary view of his situation. A peal louder and of longer duration than any of the preceding, which now burst over his head, seeming as if it would rend the woods asunder, was quickly followed by a heavy fall of rain which penetrated the clothing of the stranger ere he could obtain the shelter of a large oak, which stood at a little distance.

Almost exhausted with the labors of the day, he was about making such disposition of the saddle and his own coat, as would enable him to pass the night with what comfort circumstances would admit, when he espied a light glimmering through the trees. Animated with the hope of better lodgings, he determined to proceed. The way, which was somewhat steep, became attended with more obstacles the farther he advanced; the soil being composed of clay, which the rain had rendered so soft that his feet slipped at every step. By the utmost perseverance, this difficulty was finally overcome without any accident, and he had the pleasure of finding himself in front of a decent looking farmhouse. The watch dog began barking, which brought the owner of the mansion to the door.

"Who is there?" said he.

"A friend who has lost his way, and in search of a place of shelter," was the answer.

"Come in, sir," added the speaker, "and whatever my house will afford, you shall have, with welcome."

"I must provide for the weary companion of my journey," remarked the other.

But the former undertook the task, and

after conducting the new-comer into a room where his wife was seated, he led the horse to a well-stored barn, and there provided for him most bountifully. On re-joining the traveller, he observed, "That is a noble animal of yours, sir."

"Yes," was the reply, "and I am sorry that I was obliged to misuse him so as to make it necessary to give you so much trouble with the care of him; but I have yet to thank you for your kindness to both of us."

"I did no more than my duty, sir," said the entertainer, "and therefore, am entitled to no thanks. But Susan," added he, turning to the hostess with a half-reproachful look, "why have you not given the gentleman something to eat?"

Fear had prevented the good woman from exercising her well-known benevolence; for a robbery had been committed by a lawless band of depredators, but a few weeks before, in that neighborhood, and as report stated that the ruffians were all well dressed, her imagination suggested that this man might be one of them.

At her husband's remonstrance, she now readily engaged in repairing her error, by preparing a splendid repast. During the meal there was much interesting conversation among the three. As soon as the worthy countryman perceived that his guest had satisfied his appetite, he informed him that it was now the hour at which the family usually performed their devotions, inviting him at the same time to be present. The invitation was accepted in these words:—

"It would afford me the greatest pleasure to commune with my heavenly Preserver, after the events of the day; such exercises prepare us for the repose which we seek in sleep."

The host now reached the Bible from the shelf, and after reading a chapter and singing, concluded the whole with a fervent prayer; then, lighting a pine knot, conducted the person he had entertained to his chamber, wished him a good night's rest, and retired to the adjoining apartment.

"John," whispered the woman, "that is a good gentleman, and not one of the highwaymen as I supposed."

"Yes, Susan," said he, "I like him

better for thinking of his God, than all his kind inquiries after our welfare. I wish our Peter had been home from the army, if it was only to hear this good man talk; I am sure Washington himself could not say more for this country, nor give a better history of the hardships endured by our brave soldiers."

"Who knows now," inquired the wife, "but it may be himself after all, my dear; for they do say he travels just so, all alone, sometimes. Hark! what's that?"

The sound of a voice came from the chamber of their guest, who was now engaged in his private religious worship. After thanking the Creator for his many mercies, and asking a blessing on the inhabitants of the house, he continued, "And now, Almighty Father, if it be thy holy will, that we shall obtain a place and a name among the nations of the earth, grant that we may be enabled to show our gratitude for thy goodness, by our endeavors to fear and obey thee. Bless us with wisdom in our councils, success in battle, and let our victories be tempered with humanity. Endow, also, our enemies with enlightened minds, that they may become sensible of their injustice, and willing to restore liberty and peace. Grant the petition of thy servant, for the sake of him whom thou hast called thy beloved Son: nevertheless, not my will, but thine be done. Amen."

The next morning, the traveller, declining the pressing solicitation to breakfast with his host, declared it was necessary for him to cross the river immediately; at the same time offering part of his purse as a compensation for what he had received, which was refused.

"Well, sir," continued he, "since you will not permit me to recompense you for your trouble, it is but just that I should inform you on whom you have conferred so many obligations, and also add to them by requesting your assistance in crossing the river. I had been out yesterday, endeavoring to obtain some information respecting our enemy, and being alone, ventured too far from the camp. On my return, I was surprised by a foraging party, and only escaped by my knowledge of the roads, and the fleetness of my horse. My name is George Washington."

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Surprise kept the listener silent for a moment; then, after unsuccessfully repeating the invitation to partake of some refreshment, he hastened to call two negroes, with whose assistance he placed the horse on a small raft of timber that was lying in the river, near the door, and soon conveyed the general to the opposite side of the river where he left him to pursue his way to the camp, wishing him a safe and prosperous journey. On his return to the house, he found that while he was engaged in making preparations for conveying the horse across the river, his illustrious visitor had persuaded his wife to accept a token of remembrance, which the family are proud of exhibiting to this day. The above is only one of the hazards encountered by this truly great patriot, for the purpose of transmitting to posterity the treasures we now enjoy. Let us acknowledge the benefits received, by our endeavors to preserve them in their purity; and by keeping in remembrance the great Source whence these blessings flow, we may be enabled to render our names worthy of being enrolled with that of the Father of his country.

THE BOA CONSTRICTOR.



THE place which the
boa should occupy in
a regular system is
not well determined,
and this arises from
the circumstance that
travellers have enter-
ed much into the his-
tory and habits of the larger species of
serpents without carefully describing the
animals themselves. We shall be con-
tent to follow Blumenbach in stating that
the enormous reptile usually called the
boa constrictor is found in the East Indies
and in Africa, and does not appear to differ
much from the amaru of South America,
which was worshipped by the Antis of
Peru. It is the largest of serpents. Its
average length appears to be about thirty
feet, but it sometimes attains to forty, fifty,
or even sixty feet; it therefore occupies
the relative position among reptiles which

the elephant does among quadrupeds, and
the whale among the inhabitants of the
sea. In the venomous species, the poison
fangs are in the upper jaw—somewhat
larger than the other teeth, projected for-
ward in the act of biting, but at other times
disposed along the roof of the mouth.
These are wanting in the boa, but other-
wise the teeth are disposed much in the
same manner as in other serpents—being
long, sharply pointed, and inclined back-
ward—of no use for mastication, but evi-
dently intended only for the purpose of
holding the prey. The genus is dis-
tinguished by having a hook on each side
the vent; the body is compressed, inflated
toward the middle; the tail is prehensile;
the scales small, particularly upon the
back of the head. The ground color of
the boa constrictor is yellowish gray, with
a large chestnut colored interrupted chain,
extending down the back from the head
to the tip of the tail, and subtrigonal spots
down the sides. The name "constrictor"
is derived from the terrible muscular pow-
er by which it crushes to death the un-
fortunate animals embraced in its folds.
It is true that most serpents possess, in
some degree, this constrictive power, but
it is not commonly used by the smaller
species in seizing their prey, the mouth
and teeth alone sufficing for the purpose.

Requiring food only at long intervals,
the boa constrictor, like most other ser-
pents, spend the greater part of its life
coiled up asleep, or in a state of stupor,
in which, if it has recently been gorged
with food, it may be overcome with little
danger or difficulty, although to attack it
in an active state would be madness. But
when it becomes hungry, the gigantic
reptile assumes an activity strikingly in
contrast with the sluggish inertness it be-
fore exhibited. When properly in wait
for prey, it usually attaches itself to the
trunk or branches of a tree, in a situation
likely to be visited by quadrupeds for the
sake of pasture or water. In this posture
it swings about, as if a branch or pendent
of the tree, until some unhappy animal
approaches, and then, suddenly relinquish-
ing its position, it seizes the unsuspecting
victim, and coils its body spirally around
the throat and chest. After a few inef-
fectual cries and struggles, the poor en-



Attack of the Boa Constrictor on a Sleeping Lascar



Attack of the Boa Constrictor on a Sleeping Lascar.

tangled animal is suffocated and expires. It is to be remarked that, in producing this effect, the serpent does not merely wreath itself around the prey, but places fold over fold, as if desirous of adding as much weight as possible to the muscular effort; these folds are then gradually tightened with such immense force as to crush the principal bones, and thus not only to destroy the animal, but to bring its carcase into a state the most easy for its being swallowed. This having been effected, the boa addresses himself to the task of swallowing the carcase. Having pushed the limbs into the most convenient position, and covered the surface with its glutinous saliva, the serpent takes the muzzle of the prey into its mouth, which is capable of vast expansion; and, by a succession of wonderful muscular contractions, the rest of the body is gradually drawn in, with a steady and regular motion. As the mass advances in the gullet, the parts through which it has passed resume their former dimensions, though its immediate position is always indicated by an external protuberance. Their prey generally consists of dogs, goats, deer, and the smaller sorts of game. Bishop Heber considers as quite untrue the stories of their attacking such animals as the buffalo or the cheetah; but men are by no means exempt from their attacks. This is shown by the following anecdote, which the engraving illustrates:—

The captain of a country ship, while passing the Sunderbunds, near Calcutta, sent a boat into one of the creeks to obtain some fresh fruits which are cultivated by the few miserable inhabitants of this inhospitable region. Having reached the shore, the crew moored the boat under a bank, and left one of their party to take care of her. During their absence, the lascar, who remained in charge of the boat, overcome by heat, lay down under the seats and fell asleep. While he was in this happy state of unconsciousness, an enormous boa constrictor emerged from the jungle, reached the boat, had already coiled its huge body round the sleeper, and was in the very act of crushing him to death, when his companions fortunately returned at this auspicious moment; and, attacking the monster, severed a portion

of its tail, which so disabled it that it no longer retained the power of doing mischief. The snake was then easily despatched, and found to measure sixty-two feet and some inches in length.

GEMS OF THOUGHT.



CONVERSATION is the daughter of reasoning, the mother of knowledge, the breath of the soul, the commerce of hearts, the bond of friendship, and the nourishment of content.

Open your heart to sympathy, but close it to despondency. The flower which opens to receive the dew shuts against rain.

He who dreads giving light to the people is like a man who builds a house without windows for fear of lightning.

The shortest day of our year comes in winter—fit emblem of our life, at once dark, cold, and short.

Men, like books, have at each end a blank leaf—childhood and old age.

Graves are but the prints of the footsteps of the angel of eternal life.

Peace is the evening star of the soul, as virtue is its sun, and the two are never far apart.

Our sorrows are like thunder-clouds, which seem black in the distance, but grow lighter as they approach.

Universal love is like a glove *without* fingers which fits all hands alike and none closely; but true affection is like a glove *with* fingers which fits one hand only and sits close to that one.

Passion is a keen observer, but a wretched reasoner. It is like the telescope whose field is clearer, the more concentrated it is.

Esteem is the mother of love, but the daughter is often older than the mother.

The grafts that circumstances make in our character, we are apt to regard as its native fruit.

Our evil genius, like the junior member of a deliberative body, always gives its views first.

A gentle heart is like ripe fruit which bends so low that it is at the mercy of every one who chooses to pluck it, while the harder fruit keeps out of reach.

To seek to soothe a ruffian by reason, is to attempt to bind a buffalo with a garland of flowers.

Wisdom is an open fountain, whose waters are not to be sealed up, but kept running for the benefit of all.

Calumny is like the wasp that teases and against which you must not attempt to defend yourself unless you are certain to destroy it; otherwise it returns to the charge more furious than ever.

Little minds rejoice over the errors of men of genius, as the owl rejoices at an eclipse.

Man passes his life in reasoning on the past, in complaining of the present, and trembling for the future.

Pleasure is seldom found where it is sought. Our brightest blazes of gladness are commonly kindled by unexpected sparks.

Misery requires action—happiness, repose.

Fancy rules over two thirds of the universe—the past and the future—while Reality is confined to the present.

Hope is like a bad clock, for ever striking the hour of happiness, whether it has come or not.

Riches are not easily acquired, and when acquired, are, with extreme care, preserved; but when death comes they are gone! Be not, therefore, too anxious for wealth. The poisonous tree of this world bears two fruits of exquisite savor; poetry, sweet as nectar, and the society of the good.

As a stone is raised with great labor up a mountain, but thrown down in an instant, thus are our virtues acquired with difficulty, our vices with ease.

The vicious, notwithstanding the sweetness of their words, and the honey of their tongues, have a whole storehouse of poison within their hearts.

There is no union between the thoughts, the words, and actions of the wicked; but the thoughts, words, and actions of the good, all agree.

The truly great are calm in danger, merciful in prosperity, eloquent in the as-

sembly, courteous in war, and anxious for fame.

Danger should be feared when distant, and braved when present.

Every one looking downward becomes impressed with his own greatness, but looking upward, feels his own littleness.

As a mound of earth raised by the ants, or the sands in the hour-glass, so religion, learning, and riches, increase only by degrees.

The allotted days and nights of human life, like a current down the sides of a mountain, pass away not to return.

SCRIPTURAL ALLUSIONS TO DEW.



OST or all of the grand phenomena and aspects of nature are mentioned in Scripture, and so applied as to teach or illustrate some im-

portant lesson. They are spoken of as declaring the glory of God in creation, they are employed to represent his dealings with the children of men. The snow the hail, the thunder, and the storm, are appealed to as gradually showing forth his power and terrible majesty; the wind "that bloweth where it listeth," the early and the latter rain, and the gently dropping dew, are used as appropriate images of the blessings continually showered down from on high, and especially of the influence of the Holy Spirit upon the soul. The Bible, designed to be an intelligible record of divine instruction, abounds in imagery borrowed from material nature, and expressly adapted to arrest and charm the attention. It contains many beautiful allusions to the phenomena of dew, a few of which we propose making the subject of this article.


The beneficial effects of dew, in reviving and refreshing the entire landscape, have already been adverted to. How frequently do we observe the aspect of the fields and woods improved by the dews of

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a single night? In the summer season, especially, when the solar heat is most intense, and when the luxuriant vegetation requires a constant and copious supply of moisture, an abundant formation of dew seasonably refreshes the thirsty herbs, and saves them from the parching drought. In eastern countries, like Judea, where the summer is fervid and long continued, and the evaporation excessive, dew is both more needed, and formed in much greater abundance, than in our more temperate climate. There it may be said to interpose between the vegetable world and the scorching influence of a powerful and unclouded sun—to be the hope and joy of the husbandman, the theme of his earnest prayer and heartfelt gratitude. Accordingly, the sacred writers speak of it as the choicest of blessings wherewith a land can be blessed; while the want of it is with them almost synonymous with a curse. Moses, blessing the land of Joseph, classes the dew among "the precious things of heaven;" and David, in his lamentation over Saul and Jonathan, poetically invoking a curse upon the place where they fell, wishes no dew to descend, upon the mountains of Gilboa. The Almighty himself, promising, by the mouth of one of his prophets, to bless his chosen people, says, "I will be as the dew unto Israel; he shall grow as the lily, and cast forth his roots as Lebanon." Here the refreshing and fertilizing effects of dew beautifully represent the prosperity of the nation which God specially favors and protects. The dew is also employed, by the prophet Micah, to illustrate the influence of God's people in the midst of an evil world, where he says, that "the remnant of Jacob shall be in the midst of many people, as a dew from the Lord." What emblem more expressive of that spiritual life, in some of its members, which preserves a people from entire corruption and decay!

Another beautiful application of the dew in Scripture, is its being made to represent the influence of heavenly truth on the soul. In the commencement of his sublime song, Moses employs these exquisite expressions: "My doctrine shall drop as the rain, my speech shall distil as the dew; as the small rain upon the tender herb, and as the showers upon the

grass." Similar passages might be quoted from the sacred writers, wherein, by a felicity of comparison that all must at once acknowledge, the word and ordinances of God are likened to the dew of the field. How strikingly the reviving effects of dew upon the parched and thirsty vegetation of the sun-scorched plain, typify the moral and spiritual freshness diffused by the word preached in its purity, and received with faith and love. As the dew of a night will sometimes bring back beauty and bloom to unnumbered languishing plants and flowers, and spread a pleasant freshness over all the fields, so will some rich and powerful exposition of revealed truth, or some ordinance, dispensed with genuine fervor, not unfrequently enliven and refresh a whole Christian congregation, or even spread a moral verdure over a large portion of the visible church. If the soul be stained in its intercourse with the world; if, like the grass on the wayside that is covered with dust, it contract impurity with the beaten paths of life, the word of God falls upon it with a refreshing influence, like the dews of night upon that grass, to water it, and to wash away all marks of contact with surrounding corruption. If it be scorched by the withering sun of persecution, and pine for spiritual nourishment and support, that same word bedews it with the sweetest influences, and affords it sustenance, in richness and salubrity like that of the heavenly manna itself.

But let us not forget that the word of God sheds a healing influence only when it is rendered effectual by the Spirit of all truth. The Spirit worketh through the instrumentality of the word; silently, secretly, and powerfully worketh; falling gently, operating unseen, and diffusing refreshment around, like the balmy dews of night. Of the Spirit's agency the dew is, indeed, the finest and aptest illustration. As dew to the parched and drooping flower, so is the Spirit shed upon the Christian's soul; as the "dew of Hermon," or "the dew that descends upon the mountains of Zion," spreading freshness and beauty over the whole surface of the ground, so is the Spirit poured out in rich abundance upon the church, the spiritual Zion, in times of reviving and refreshing

from the Lord. As we spring from our couch, therefore, on the bright summer morning, and walk joyfully forth into the fragrant fields, to breathe the inspiring air, feast our eyes upon the glowing mixture of colors in which all nature is arrayed, and listen to the sweet and various music that ascends from every grove, let us not fail to derive a high spiritual lesson from the dew that is so thickly strown upon the grass beneath our feet. Distilled in the silent night by the reciprocal influences of heaven and earth, it bathes and refreshes each blade and flower with its stainless moisture. Let us regard it as the chosen image of God's choicest blessing, the cleansing and sanctifying influence of his Spirit upon the heart of man.

THE FOOD OF MAN.

The potato is a native of South America, and is still found wild in Chili, Peru and Monte Video. In its native state the roots are small and bitter. The first mention of it by European writers is in 1588. It is now spread over the world. Wheat and rye originated in Tartary and Siberia, where they are still indigenous. The only country where the oat is found wild is in Abyssinia, and thence may be considered a native. Maize or Indian corn is a native of Mexico, and was unknown in Europe until after the discoveries of Columbus. The bread-fruit tree is a native of South Sea islands, particularly Otaheite. Tea is found a native nowhere except in China and Japan, from which country the world is supplied. The cocoa-nut is a native of most equinoctial countries, and is one of the most valuable trees, as food, clothing, and shelter, are afforded by it. Coffee is a native of Arabia Felix, but is now spread into both the East and West Indies. The best coffee is brought from Mocha, in Arabia, whence about fourteen millions of pounds are annually exported. St. Domingo furnishes from sixty to seventy millions of pounds yearly. All the varieties of the apple are derived from the crab apple which is found native in most parts of the world. The peach

is derived from Persia, where it still grows in a native state, small, bitter, and with poisonous qualities. Tobacco is a native of Mexico and South America, and lately one species has been found in New Holland. Tobacco was first introduced into England from North Carolina, in 1586, by Raleigh. Asparagus was brought from Asia; cabbage and lettuce from Holland; horse-radish from China; rice from Ethiopia; beans from the East Indies; onions and garlicks are natives of various places both in Asia and Africa. The sugar cane is a native of China, and thence is derived the art of making sugar from it.

GLASGOW.



GLASGOW, is the most populous city in Scotland, and occupies a highly advantageous situation on the banks of the Clyde, in Lanarkshire, a few miles from the place

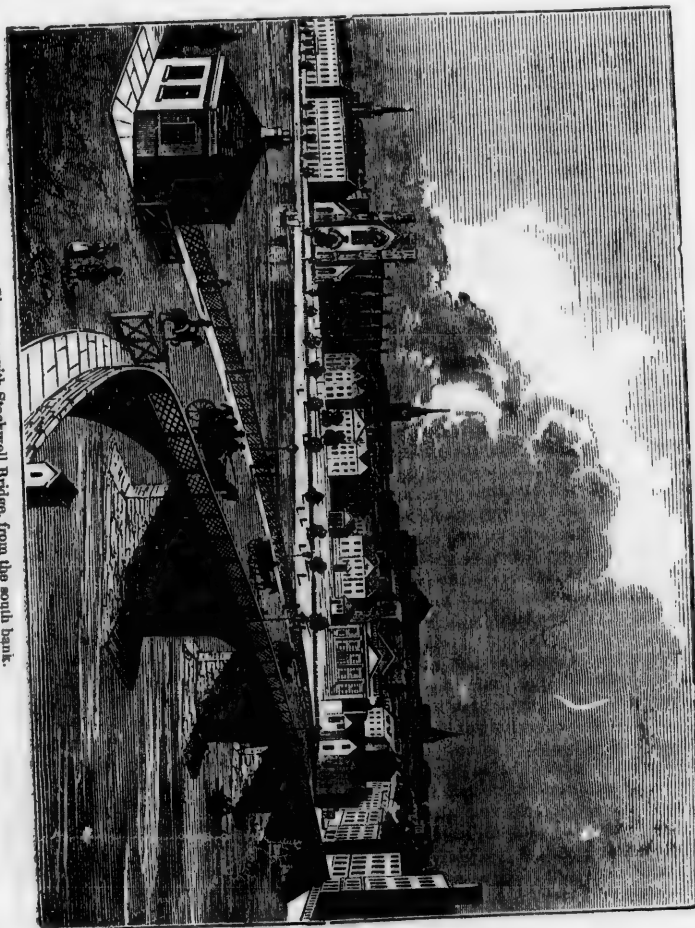
where the river expands into an estuary, 42 miles from Edinburgh, 397 from London, and 196 from Dublin. The external appearance of this great city is elegant and impressive. The streets are regular in arrangement, and substantially built of smooth stone. The public buildings are in general handsome, and, in most instances, disposed in such a manner as to be seen to advantage. The more ancient part of the city extends along the line of the High street, between the cathedral and the river; the more modern and elegant part stretches toward the northwest. On the left bank of the river, and connected by three bridges, is situated the populous barony of Gorbals, bearing the same reference to Glasgow which Southwark bears to London. Westward from the lowest of the bridges, both sides of the river are formed into quays, which, owing to recent operations for deepening the channel, are now approached by vessels drawing about fourteen or fifteen feet water. The quay on the right or north bank

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Glasgow, with Stockwell Bridge, from the south bank.



is denominated the *Broomielaw*. Twenty years ago the Broomielaw was a limited extent of quay, ranging along the northern side of the Clyde, from the Broomielaw, or Jamaica street bridge, downward, to which only vessels of a comparatively small amount of tonnage came up; and but five or six years ago, the southern side was an extent of green sward, on which the inhabitants could walk or sit, contemplating the "shipping" on the opposite side. But now the river is rendered wider and deeper at the Broomielaw; the northern quay extends an immense length along the bank; and on the southern side, where children might once safely gambol, and school-boys spent their Saturday holidays in rolling about among the grass, is now a handsome quay, with its sheds and cranes and pulleys, and a stair, facing the old stair on the northern side, immediately under the bridge, to which the "herring boats" did and still do come; and whence, in earlier and simpler days, most respectable citizens might be seen trudging homeward of a morning, bearing some choice and fresh-looking, and hard-bargained-for herrings dangling from a string by the gills. The old and massive Broomielaw bridge with all its architectural garnishings, has been taken down, and the handsome structure represented in our engraving erected in its place. It has recently been extended to 3,340 feet in length, while that on the south bank is 1,260 feet.

Glasgow took its rise as a dependency of the cathedral of the bishops (latterly archbishops) of the see bearing its name. It was not, however, till long after the reformation, that it became a seat of considerable population. About the middle of the eighteenth century, it had acquired a considerable share of the import colonial trade, which it still retains; but, during the last seventy years, it has chiefly been distinguished as a seat of manufactures. The weaving of lawns, cambrics, and similar articles, commenced in Glasgow in 1725. The advantages enjoyed by the city for the importation of cotton, in time gave a great impulse to that species of manufacture. In 1834, out of 134 cotton-factories existing in Scotland, 100 belonged to Glasgow, and the importation of cot-

ton into that port amounted to 95,703 bales. In the weaving of this material, upward of 15,000 power-looms, and 32,000 hand-loom weavers, were at the same time employed by the manufacturers of Glasgow. Of calico-printing establishments there are upward of forty. It would be vain to attempt an exact enumeration of the less prominent features of the business carried on in Glasgow. The chief articles of importation, besides cotton, are sugar, rum, tea, tobacco, and timber. The chief articles manufactured or prepared, besides cotton goods, are sugar, soap, glass, iron, ropes, leather, chymical stuffs, and machinery. There were recently seven native banks, and several branches of other banks. During a year extending from a certain period in 1839, to a certain period in 1840, 5,484 vessels, of 296,302 tonnage, arrived at the Glasgow harbor; the customhouse revenue of 1839 was £468,975, and the harbor dues of the twelvemonth ending August 31 of that year were £35,826. It is worthy of remark, that the Clyde was the first river in the elder hemisphere on which steam navigation was exemplified. A steam-vessel of three-horse power was set afloat on the river in January, 1812, by Mr. Henry Bell of Helensburgh; and there were twenty such vessels on the Clyde before one had disturbed the waters of the Thames. In 1835, there were sixty-seven steam-vessels, of 6,691 aggregate tonnage, connected with Glasgow, eighteen of which plied to Liverpool, Belfast, Dublin, and Londonderry. Within the last few years, the city has become a great centre of the iron trade, this metal being produced in the neighborhood to an annual amount of not less than 200,000 tons. As a necessary consequence of the commerce and manufactures which flourish in Glasgow, the city has a vast retail trade in all the articles of luxury and necessity which are used by human beings. But no circumstance connected with Glasgow could give so impressive an idea of the height to which business has been carried in it, as the rapid advance and present great amount of its population. By the census of 1791, the inhabitants were 66,578; and by the first government census in 1801, they were 77,385. But these numbers have been

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New Broomielaw Bridge, Glasgow.



increased in 1811, 1821, and 1831, respectively to 110,749, 147,043, and 202,426. As the increase is about 7,000 per annum, the present amount (1841) is supposed to be fully 285,000—a mass of population which, at the time of the union, could not have been dreamed of as likely ever to exist in any Scottish city.

The cathedral, or high church, is situated in the northern outskirts of the city, near the upper extremity of the High street. The bulk of the existing building was constructed at the close of the twelfth century, in place of another which had been consecrated in 1136, but was destroyed by fire. It consists of a long nave and choir, a chapter-house projecting from the northeast angle, a tower and spire in the centre, and a crypt extending beneath the choir or eastern portion of the building. In the nave, termed the outer high kirk, was held the celebrated general assembly of the church, November, 1638, by which episcopacy was abolished and pure presbytery replaced—the first great movement in the civil war.

The elevated ground, near the east end of the cathedral, has been formed into an ornamental place of sepulture, under the appellation of the Necropolis. Since 1831, the society of merchants, its proprietors, have expended the sum of £6,000 in laying out about twenty-four acres of ground in walks and shrubberies, and in connecting the spot with the opposite slope by means of a bridge across the intermediate rivulet. The taste manifested in the whole scheme and in its execution, is extremely creditable to the city. The walks, several miles in extent, command an extensive view of the neighboring country. They are skirted by numberless sepulchral plots and excavations, where already affection has been busy in erecting its "frail memorials," all of which, it may be mentioned, are fashioned according to certain regulations, with a view to general keeping and effect.

The college buildings are situated on the east side of the High street, about halfway between the cathedral and the Tron-gate. They consist in a sort of double court; the front which adjoins to the street being 330 feet in length, and three stories in height. The whole edifice has

a dignified and venerable appearance. A large piece of ground behind the college is formed into a park or green, interspersed with trees and hedges, and always kept in grass, to be used by the students as a place of exercise or amusement. In the college there are appointed professors or teachers of about thirty branches of science, theology, and polite literature. At the back of the interior court stands the modern Grecian building which contains the Hunterian Museum. This is a large collection of singular natural objects, coins, medals, rare manuscripts, paintings, and relics of antiquity, originally formed by Dr. William Hunter, the celebrated anatomist, and bequeathed by him to this university, at which he received his education. While the college confers professional education, popular instruction is attainable, under unusually advantageous circumstances, through the medium of the Andersonian institution, an extensive school of science founded at the close of the last century, and connected with which there is a general museum, containing many curious objects, and constantly open to the public.

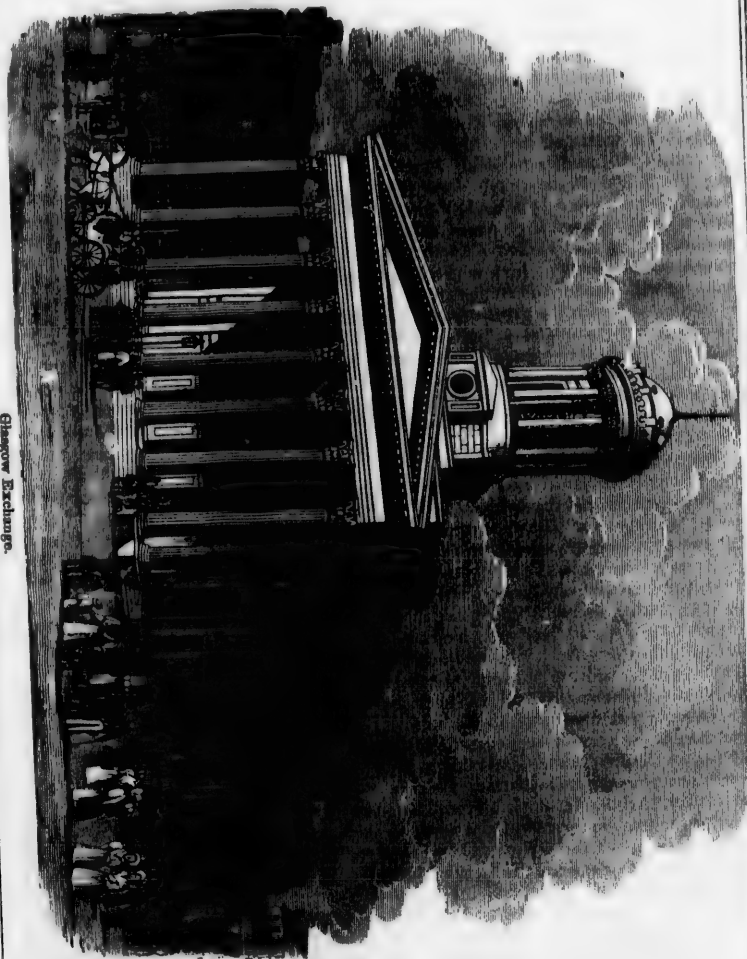
The most attractive modern building in Glasgow is the royal exchange in Queen street, a most superb structure, erected in 1829, as a point of assemblage for the merchants in the western part of the city. The principal room is a large hall, supported by a double row of columns, and used as a reading-room. The front of the exchange consists of a magnificent portico, surmounted by a cupola; and, as the building is isolated, the other sides are also of decorative architecture. The portico is 74 feet in width and 27 deep; and the body of the building is 177 feet by 74. The principal room is 93 feet by 62, and 36 high in the centre. Altogether, this building, supported by a set of very elegant domestic structures of similarly august proportions, impresses the mind of a stranger as something signally worthy of a great city.

Since the reform act of 1832, Glasgow has the privilege of returning two members to parliament. The places of worship, charitable institutions, and associations of various kinds for public objects, are very numerous. A laudable zeal for the improvement of education marks the

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city; and a normal school, or seminary for the rearing of teachers—the first in the empire—has been erected under the auspices of a private society.

The means of communication in connexion with Glasgow, are suitable to the character of the city as one of the greatest emporia of commerce and manufacture in the world. Besides a river, navigable by vessels drawing fifteen feet of water, and which gives the means of a ready communication with the western shores of Britain, with Ireland, and with America, the Forth and Clyde canal, of which a branch comes to Port Dundas, in the northern suburb, serves to convey goods and passengers to the eastern shores of the island, while canals of less note connect the city with Paisley and Johnstone in one direction, and with the great coal-fields of Monkland in the other. There is also a railway, which traverses the same great coal-field, by Garnkirk and Wishaw, and conveys passengers as well as coal and goods. Another railway, connecting the city with Kilmarnock, Ayr, and the port of Ardrossan, was opened in 1840. During the year 1841 a third railway, passing by Falkirk and Linlithgow to Edinburgh, was opened. Others are projected. The steam communication between Glasgow and Liverpool, Dublin, and other Irish ports, is conducted on a scale which may be called grand. The vessels are superb in magnitude, decoration, and power; and they sail frequently and rapidly. The steam intercourse between Glasgow and various places in Scotland, both for passengers and objects of traffic, is also conducted on a great scale: among the places touched at in the Clyde and to the south are Greenock, Dunbarton, Dunoon, Rothesay, Arran, Gourock, Troon, and Ayr. Among the places to the north to which vessels sail regularly, are Inverary, Campbelton, Oban, Staffa, and Iona, Mull, Arisaig, Skye, Stornoway, and Inverness. In opening up markets for West Highland produce, and introducing luxuries in return, these vessels have also been of marked service, inasmuch that the value of property in those hitherto secluded districts has experienced a considerable rise. The country around Glasgow abounds in busy towns and villages.

THE CONSTANCY OF NATURE AND FAITHFULNESS OF GOD.



HE constancy of nature is taught by universal experience, and even strikes the popular eye as the most characteristic of those features which have been impressed upon her. It may need the aid of philosophy to learn how unvarying nature is in all her processes—how even her seeming anomalies can be traced to a law that is inflexible—how what might appear at first to be the caprices of her waywardness, are, in fact, the evolutions of a mechanism that never changes—and that the more thoroughly she is sifted and put to the test by the interrogations of the curious, the more certainly will they find that she walks by a rule which knows no abatement, and perseveres with obedient footstep in that even course from which the eye of strictest scrutiny has never yet detected one hair-breadth of deviation. It is no longer doubted by men of science that every remaining semblance of irregularity in the universe is due, not to the fickleness of nature, but to the ignorance of man—that her most hidden movements are conducted with a uniformity as rigorous as fate—that even the fitful agitations of the weather have their law and their principle—that the intensity of every breeze, and the number of drops in every shower, and the formation of every cloud, and all the occurring alterations of storm and sunshine, and the endless shiftings of temperature, and those tremulous varieties of the air which our instruments have enabled us to discover, but have not enabled us to explain—that still they follow each other by a method of succession, which, though greatly more intricate, is yet as absolute in itself as the order of the seasons, or the mathematical courses of astronomy. This is the impression of every philosophical mind with regard to nature, and it is strengthened by each new accession that is made to science. The more we are acquainted with her the more are we led to recognise her constancy; and to view her as a mighty though com-

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plicated machine, all whose results are sure, and all whose workings are invariable.

But there is enough of patent and palpable regularity in nature, to give also to the popular mind the same impression of her constancy. There is a gross and general experience that teaches the same lesson, and that has lodged in every bosom a kind of secure and steadfast confidence in the uniformity of her processes. The very child knows and proceeds upon it. He is aware of an abiding character and property in the elements around him—and has already learned as much of the fire, and the water, and the food that he eats, and the firm ground that he treads upon, and even of the gravitation by which he must regulate his postures and his movements, as to prove that, infant though he be, he is fully initiated in the doctrine that nature has her laws and her ordinances, and that she continueth therein. And the proofs of this are ever multiplying along the journey of human observation: insomuch, that when we come to manhood, we read of nature's constancy throughout every department of the visible world. It meets us wherever we turn our eyes. Both the day and the night bear witness to it. The silent revolutions of the firmament give it their pure testimony. Even the appearances in the heavens, which superstition stood aghast, and imagined that nature was on the eve of giving way, are the proudest trophies of that stability which reigns throughout her processes—of that unswerving consistency wherewith she prosecutes all her movements. And the lesson that is thus held forth to us from the heavens above, is responded to by the earth below: just as the tides of ocean wait the footsteps of the moon, and, by an attendance kept up without change or intermission for thousands of years, would seem to connect the regularity of earth with the regularity of heaven. But, apart from these greater and simpler energies, we see a course and a uniformity everywhere. We recognise it in the mysteries of vegetation. We follow it through the successive stages of growth, and maturity, and decay, both in plants and animals. We discern it still more palpably in that beautiful circulation of the element of wa-

ter, as it rolls its way by many thousand channels to the ocean—and, from the surface of this expanded reservoir, is again uplifted to the higher regions of the atmosphere—and is there dispersed in light and fleecy magazines over the four quarters of the globe—and at length accomplishes its orbit, by falling in showers on a world that waits to be refreshed by it. And all goes to impress us with the regularity of nature, which in fact teems, throughout all its varieties, with power, and principle, and uniform laws of operation—and is viewed by us as a vast laboratory, all the progressions of which have a rigid and unfailling necessity stamped upon them.

Now this contemplation has at times served to foster the atheism of philosophers. It has led them to deify nature, and to make her immutability stand in the place of God. They seem impressed with the imagination that had the Supreme Cause been a being who thinks, and wills, and acts as man does, on the impulse of a felt and a present motive, there would be more the appearance of spontaneous activity, and less of mute and unconscious mechanism in the administrations of the universe. It is the very unchangeableness of nature, and the steadfastness of those great and mighty processes wherewith no living power that is superior to nature, and is able to shift or to control her, is seen to interfere—it is this which seems to have impressed the notion of some blind and eternal fatality on certain men of loftiest but deluded genius. And, accordingly, in France, where the physical sciences have of late been the most cultivated, have there also been the most daring avowals of atheism. The universe has been affirmed to be an everlasting and indestructible effect; and from the abiding constancy that is seen in nature through all her departments, have they inferred that thus it has always been and that thus it will ever be.

But this atheistical impression that is derived from the constancy of nature is not peculiar to the disciples of philosophy. It is the familiar and the practical impression of every-day life. The world is apprehended to move on steady and unvarying principles of its own; and these sec-

ondary causes have usurped, in man's estimation, the throne of the Divinity. Nature, in fact, is personified into God: and as we look to the performance of a machine without thinking of its maker, so the very exactness and certainty wherewith the machinery of creation performs its evolutions, has thrown a disguise over the agency of the Creator. Should God interpose by miracle, or interfere by some striking manifestation of providence, then man is awakened to the recognition of him. But he loses sight of the Being who sits behind these visible elements, while he regards those attributes of constancy and power which appear in the elements themselves. They see no demonstration of a God, and they feel no need of Him, while such unchanging and such unfailing energy continues to operate in the visible world around them; and we need not go to the schools of ratiocination in quest of this infidelity, but may detect it in the bosoms of simple and unlettered men, who, unknown to themselves, make a god of nature, and just because of nature's constancy; having no faith in the unseen Spirit who originated all and upholds all, and that because all things continue as they were from the beginning of the creation.

Such has been the perverse effect of nature's constancy of the alienated mind of man: but let us now attend to the true interpretation of it. God has, in the first instance, put into our minds a disposition to count on the uniformity of nature, inasmuch that we universally look for a recurrence of the same event in the same circumstances. This is not merely the belief of experience, but the belief of instinct. It is antecedent to all the findings of observation, and may be exemplified in the earliest stages of childhood. The infant who makes a noise on the table with his hand for the first time, anticipates a repetition of the noise from a repetition of the stroke, with as much confidence as he who has witnessed for years together the unvariableness wherewith these two terms of the succession have followed each other. Or, in other words, God, by putting this faith into every human creature, and making it a necessary part of his mental constitution, has taught him at all

times to expect the like result in the like circumstances. He has thus virtually told him what is to happen, and what he has to look for in every given condition—and by its so happening accordingly, he just makes good the veracity of his own declaration. The man who leads us to expect that which he fails to accomplish, we would hold to be a deceiver. God has so framed the machinery of his perceptions, as that we are led irresistibly to expect that everywhere events will follow each other in the very train in which we have ever been accustomed to observe them—and when God so sustains the uniformity of nature, that in every instance it is rigidly so, he is just manifesting the faithfulness of his character. Were it otherwise, he would be practising a mockery on the expectation which he himself had inspired. God may be said to have promised to every human being that nature will be constant—if not by the whisper of an inward voice to every heart, at least by the force of an uncontrollable bias which he has impressed on every constitution. So that, when we behold nature keeping by its constancy, we behold the God of nature keeping by his faithfulness—and the system of visible things, with its general laws, and its successions which are invariable, instead of an opaque materialism to intercept from the view of mortals the face of the divinity, becomes the mirror which reflects upon them the truth that is unchangeable, the ordination that never fails.

Conceive that it had been otherwise—first, that man had no faith of the constancy of nature—then how could all his experience have profited him? How could he have applied the recollections of his past to the guidance of his future history? And what would have been left to signalize the wisdom of mankind above that of veriest infancy? Or suppose that he had the implicit faith in nature's constancy, but that nature was wanting in the fulfilment of it—that at every moment his intuitive reliance on this constancy was met by some caprice or waywardness of nature, which thwarted him in all his undertakings—that instead of holding true to her announcements, she held the children of men in most distressful uncertainty by the

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freaks and the falsities in which she ever indulged herself—and that every design of human foresight was thus liable to be broken up, by ever and anon the putting forth of some new fluctuation. Tell us, in this wild misrule of elements changing their properties, and events ever flitting from one method of succession to another, if man could subsist for a single day, when all the accomplishments without were thus at war with all the hopes and calculations within. In such a chaos and conflict as this, would not the foundations of human wisdom be utterly subverted? Would not man, with his powerful and perpetual tendency to proceed on the constancy of nature, be tempted at all times, and by the very constitution of his being, to proceed upon a falsehood? It were the way, in fact, to turn the administration of nature into a system of deceit. The lessons of to-day would be falsified by the events of to-morrow. He were indeed the father of lies who could be the author of such a regimen as this—and well may we rejoice in the strict order of the goodly universe which we inhabit, and regard it as a noble attestation to the wisdom and beneficence of its great Architect.

RATIONAL RELIGION.

WHAT is true and rational religion? In answering this important question, we shall come to the point at once, without prejudice or sectarian influence; and laying aside all traditionary superstition, inquire what is *now* the will of the blessed Deity, with regard to the conduct of the children of men. What course of conduct, in us, frail, erring human creatures will *now*, under all the present existing circumstances, be acceptable and approved by our divine Creator, who continually watches over us, and observes our every act, and the thoughts of our hearts? We have so diligently examined the answer which we are now about to give to these questions, and so attentively viewed the subject in all its bearings, and with all its evidences and demonstrations, that we can not think it possible that there is any ground to doubt its correctness. First, then, let us, as

rational creatures, be ever ready to acknowledge God as our Creator and daily Preserver; and that we are each of us individually dependent on his special care and good will toward us, in supporting the wonderful action of nature which constitutes our existence; and in preserving us from the casualties, to which our complicated and delicate structure is liable. Let us also, knowing our entire dependence on Divine Benevolence, as rational creatures, do ourselves the honor to express personally and frequently, our thanks to him for his goodness; and to present our petitions to Him for the favors which we constantly require. This course is *rational*, even without the aid of revelation: but being specially invited to this course, by the divine word, and assured of the readiness of our Creator to answer our prayers and recognise our thanks, it is truly surprising that any rational being who has ever read the inspired writings, should willingly forego this privilege, or should be ashamed to be seen engaged in this rational employment, or to have it known that he practises it. Next to the worship of God by thanksgiving and prayer, we should repel and banish all feelings of anger and bitterness toward our fellow-beings, and cherish love and kind feelings toward them. This course is also rational, having the example of God in his kind dealings toward us; and conduces at once, to the glory of God, the happiness of mankind in general, and to our own individual happiness and prosperity in particular. It is a rational duty to be ever reconciled and resigned to the dispensations of Divine Providence; and to trust in the goodness and benevolence of God for the present and future, and to feel willing to have it known among our associates, that we follow a rational course. This is rational religion.

MEXICO.

THE natural resources of Mexico are immense, hardly surpassed by any country in the world. With a low coast, and alluvial bottoms, the interior of the country rises into vast plains, or steppes, at a height greater than that of the highest

mountains of our states, and yet fertile, temperate, and although much of it within the tropics, having a climate capable of yielding the vegetable productions of Burgundy, in France, or of Devonshire, in England. One day's journey, says Humboldt, will take the traveller from the suffocating atmosphere of the coast, to the region of eternal snow. Its greatest inconvenience and disadvantage is that of very shallow harbors; a disadvantage which extends to the whole of Texas, and is a great barrier in the way of commerce.

The part of Mexico which is most thickly inhabited—that is the southern extremity—is rich in soil and mines, and capable of supporting as dense a population as any country in Europe. The population is of a very mixed character, being, as some affirm, three fifths Indian, or a mixture of Spanish and Indian blood. The character of the inhabitants, even in the city of Mexico, itself, will not compare favorably with any country in Europe in point of civilization—still there is something of the nobleness of the Indian character to be found, but more of the treachery of the Spaniard.

The following is a list of the principal cities with something like the number of inhabitants in each:—

Mexico,	185,000
Puebla,	72,000
Guanaxuato,	60,000
Guadalajara,	45,000
Chihuahua,	45,000
Oaxoco,	40,000
San Louis Potosi,	20,000
Zacatecas,	23,000

The city of Mexico is represented as a place of great splendor, and containing more wealth in gold and silver than any other city of equal inhabitants, on the globe. Most of the wealth, however, is under the control of catholic priests.

The seaports are small—Vera Cruz being the largest, and that contains only about 15,000 inhabitants. Campeachy, the next seaport of importance, contains about 6,000. Acapulco and Tampico are the remaining seaport towns: the former contains about 5,000 inhabitants, and the latter about 3,000. In the province of California, however, are several towns on

the coast, Monterey being the only one of much importance. The revenue of the country is \$15,000,000 per annum, and her national debt amounts to \$94,000,000, so that after paying her annual interest, she has for the support of the army and for the purposes of government, about \$10,000,000 active funds.

THE LUXOR OBELISK, IN THE PLACE LOUIS XVI, PARIS.



HE smaller of the two obelisks of Luxor, is now erected on one of the most remarkable sites of Paris—the scene of many of those tragedies which marked that most extraordinary period of modern history—the first French revolution.

The space called the Place Louis XVI. lies between the gardens of the Tuileries and the avenue or road, thickly planted on each side with tall shady trees, which is called the Champs Elysées, or Elysian Fields—a rather high-sounding appellation, for the walks under these trees are far inferior to the walks in the gardens of the palace, of which a partial view is given in our engraving.

A ship, which was constructed expressly for the conveyance of the obelisk, sailed from Toulon in March, 1831, and arrived at Thebes in the heat of summer. The first operation of the French on their arrival was to clear the lower part of the obelisks, which was buried to a considerable depth. Both the obelisks are in a state of perfect preservation: the larger is about 80 English feet high, and the other about 76 feet. To conceal this difference, the smaller obelisk had been placed on a higher pedestal than the other, and somewhat in advance of it. Three vertical rows of hieroglyphics cover the faces of both obelisks: the middle row is cut nearly six inches deep; the two others are scarcely cut into the stone. This difference in the sculpture varies the reflection and the shadows. The pedestal

PARIS.

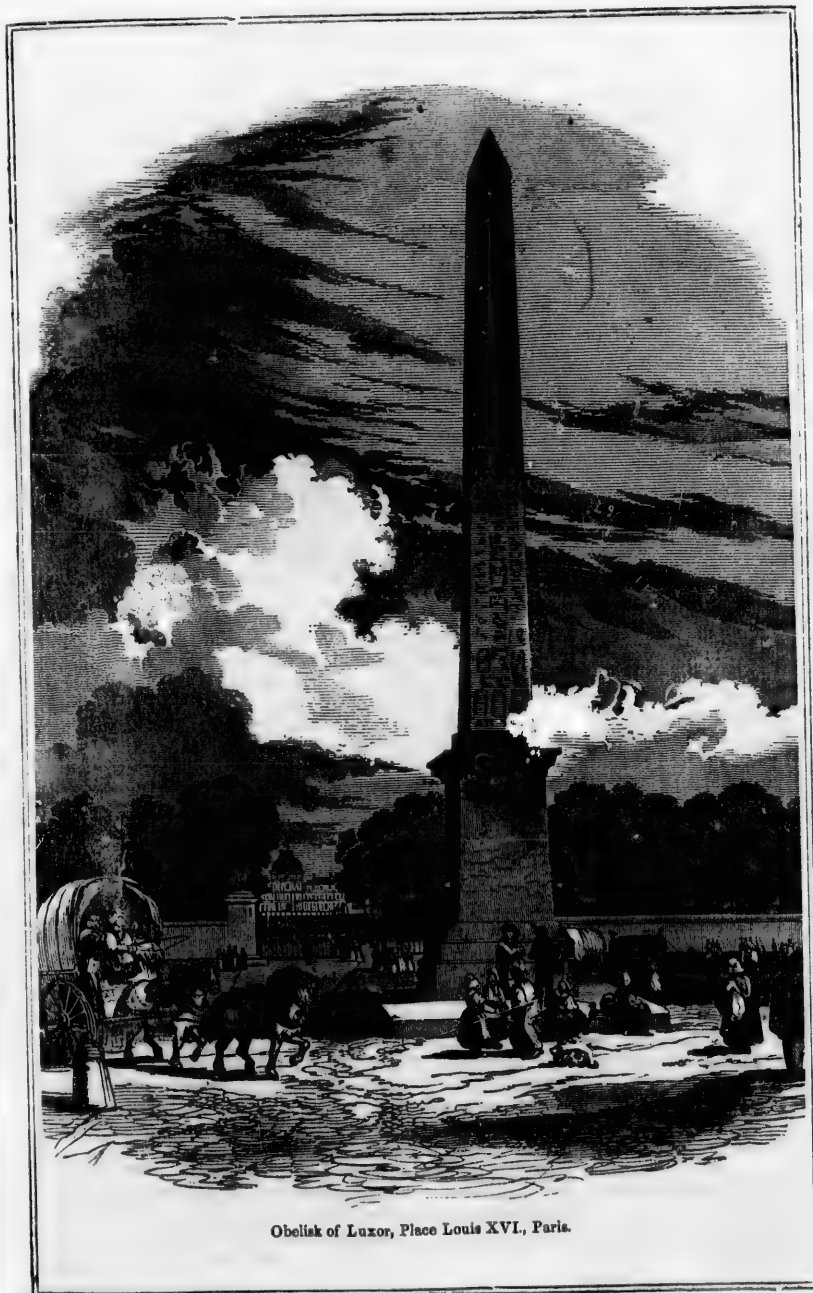
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Obelisk of Luxor, Place Louis XVI, Paris.

which was uncovered by the French, contains on the northeast and southwest faces respectively four cynocephali, which have on the chest the cartouche that is considered to contain the name of Ramesses.

It is perhaps correctly remarked by M. de Laborde that the difference in the size of the two obelisks may have arisen from the difficulty of finding two blocks of granite of the same dimensions without a flaw.

The smaller of the two obelisks was selected by the French as being in a better state of preservation, and also lighter than the other; and yet the smaller is calculated to weigh about 246 tons. The obelisk was lowered by very simple means, consisting of an anchor firmly fixed in the ground, a long beam of wood, and a few ropes and pulleys: the whole obelisk remained suspended for two minutes, during the operation of lowering it at an angle of 32 degrees. It was safely conveyed to Paris.

It was erected in the Place Louis XVI. during the summer of 1836. It was exposed to some danger during the operation, not from the want of care or skill in raising it, but from a very different cause. "The Paris archæologists," says a newspaper of the time, "are so rapacious that two guards placed round the obelisk of Luxor were not sufficient to protect the top, which was left uncovered. In spite of the penalties of the law, which are extremely severe, several fragments were broken off, and pieces not the size of a hazel-nut sold for two guineas each. It was found necessary to cover the monument entirely to save it from these Vandals." When all the preparations were completed, the obelisk was safely raised on the 25th October, the king and royal family witnessing the operation from the Hôtel de la Marine, Place de la Concorde.

French words are often used where English words might be found more expressive; but in the present instance the phrase *coup d'œil* is a good description of the view from the Tuileries. The eye looks down the noble vista where this fine remnant of ancient Egyptian art and opulence now stands, in the centre of that spot which was literally the "field of blood" of an awful time. Beyond it is

the road running through the Champs Elysées, ascending the gentle slope which is crowned by the triumphal arch begun by Napoleon, who died a prisoner and an exile, and finished by Louis Philippe, who saw the commencement of that revolution in which his father perished, and which drove himself to wander over Europe; and who has now become, by a second revolution, king of France.

MOUNTAINS.



HERE is a charm connected with mountains so powerful that the merest mention of them, the merest sketch of their magnificent features, kindles the imagination, and carries the spirit at once into the bosom of their enchanted regions. How the mind is filled with their vast solitude! how the inward eye is fixed on their silent, their sublime, their everlasting peaks! How our heart bounds to the music of their solitary cries—to the tinkle of their gushing rills! to the sound of their cataracts—how inspiring are the odors that breathe from the upland turf, from the rock-hung flower, from the hoary and solemn pine! how beautiful are those lights and shadows thrown abroad, and that fine transparent haze which is diffused over the valleys and lower slopes, as over a vast, inimitable picture!

The heat of summer has dried up the moisture with which winter rains saturate the spongy turf of the hollows; and the atmosphere, clear and settled, admits of the most extensive prospects. Whoever has not climbed the long and heathy ascents, and seen the trembling mountain flowers, the glowing moss, the richly-tinted lichens at his feet; and scented the fresh aroma of the uncultivated sod, and of the spicy shrubs; and heard the bleat of the flock across their solitary expanses, and the wild cry of the mountain birds, the raven, or the eagle; and seen the rich and russet hues of distant slopes

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MOUNTAINS.

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tinkle of their gush-
nd of their cataracts—
the odors that breathe
rf, from the rock-hung
ary and solemn pine!
ose lights and shadows
that fine transparent
fused over the valleys
over a vast, inimitable

summer has dried up the
h winter rains saturate
the hollows; and the
and settled, admits of
prospects. Whoever
e long and heathy as-
ne trembling mountain
ing moss, the richly-
his feet; and scented
f the uncultivated sod,
shrubs; and heard the
across their solitary ex-
ild cry of the mountain
r the eagle; and seen
t hues of distant slopes

and eminences, the livid gashes of ravines and precipices, the white glittering line of falling waters, and the cloud tumultuously whirling round the lofty summit; and then stood panting on that summit, and beheld the clouds alternately gather and break over a thousand giant peaks and ridges of every varied hue—but all silent as images of eternity; and cast his gaze over lakes and forests, and smoking towns, and wide lands to the very ocean, in all their gleaming and reposing beauty, knows nothing of the treasures of pictorial wealth which mountains possess.

But when we let loose the imagination from even these splendid scenes, and give it free charter to range through the glorious Alps, Apennines, or Andes, how is it possessed and absorbed by all the awful magnificence of their scenery and character! The sky-ward and inaccessible pinnacles, the—

"Palaces where nature thrones
Sublimity in icy halls!"

the dark Alpine forests, the savage rocks and precipices, the fearful and unfathomable chasms filled with the sound of ever-precipitating waters; the cloud, the silence, the avalanche, the cavernous gloom, the terrible visitations of heaven's concentrated lightning, darkness, and thunder; or the sweeter features of living, rushing streams, spicy odors of flower and shrub, fresh spirit-elating breezes sounding through the dark pine grove; the ever-varying lights and shadows and aerial hues; the wide prospects, and, above all, the simple inhabitants.

We delight to think of the people of mountainous regions; we please our imaginations with their picturesque and quiet abodes; with their peaceful, secluded lives, striking and unvarying costumes, and primitive manners. We involuntarily give to the mountaineer heroic and elevated qualities. He lives among noble objects, and must imbibe some of their nobility; he lives among the elements of poetry, and must be poetical; he lives where his fellow-beings are far, far separated from their kind, and surrounded by the sternness and the perils of savage nature; his social affections must, therefore, be proportionately concentrated, his home feelings lively and strong; but, more than all, he lives with-

in the barriers, the strongholds, the very last refuge which Nature herself has reared to preserve alive liberty in the earth, to preserve to man his highest hopes, his noblest emotions, his dearest treasures—his faith, his freedom, his hearth, and home. How glorious do those mountain-ridges appear when we look upon them as the unconquerable abodes of free hearts; as the stern heaven-built walls from which the few, the feeble, the persecuted, the despised, the helpless child, the delicate woman, have from age to age, in their last perils, in all their weaknesses and emergencies, when power and cruelty were ready to swallow them up, looked down, and beheld the million waves of despotism break at their feet—have seen the rage of murderous armies, and tyrants, the blasting spirit of ambition, fanaticism, and crushing domination, recoil from their bases in despair. "Thanks be to God for mountains!" is often the exclamation of our heart, as we trace the history of the world. From age to age, they have been the last friends of man. In a thousand extremities they have saved him. What great hearts throbbed in their defiles from the days of Leonidas to those of Andreas Hofer! What lofty souls, what tender hearts, what poor and persecuted creatures have they sheltered in their stony bosoms from the weapons and tortures of their fellow-men!

"Avenge, O Lord, thy slaughtered saints, whose bones
Lie scattered on the Alpine mountains cold!"

was the burning exclamation of Milton's agonized and indignant spirit, as he beheld those sacred bulwarks of freedom for once violated by the disturbing demons of the earth; and the sound of his fiery and lamenting appeal to heaven will be echoed in every generous soul to the end of time.

Thanks be to God for mountains! The variety which they impart to the glorious bosom of our planet were no small advantage; the beauty which they spread out to our vision in their woods and waters, their crags and slopes, their clouds and atmospheric hues, were a splendid gift; the sublimity which they pour into our deepest souls from their majestic aspects; the poetry which breathes from their streams, and dells, and airy heights, from the sweet abodes, the garbs and manners

of the inhabitants, the songs and legends which have awoken in them, were a proud heritage to imaginative minds; but what are all these when the thought comes, that without mountains the spirit of man must have bowed to the brutal and the base, or sunk to the monotonous level of the plain.

When we turn our eyes upon the map of the world, and behold how wonderfully the countries where our faith was nurtured, where our liberties were generated, where our philosophy and literature, the fountains of our intellectual grace and beauty sprang up, were as distinctly walled out by God's hand with mountain ramparts from the eruptions and interruptions of barbarism, as if at the especial prayer of the early fathers of man's destinies, we are lost in an exulting admiration. Look at the bold barriers of Palestine! see how the infant liberties of Greece were sheltered from the vast tribes of the uncivilized north by the heights of Hæmus and Rhodope! behold how the Alps describe their magnificent crescent, inclining their opposite extremities to the Adriatic and Tyrrhine seas, locking up Italy from the Gallic and Teutonic hordes till the power and spirit of Rome had reached their maturity, and she had opened the wide forest of Europe to the light, spread far her laws and language, and planted the seeds of many mighty nations!

Thanks be to God for mountains! Their colossal firmness seems almost to break the current of time itself; the geologist in them searches for traces of the earlier world; and it is there too that man, resisting the revolutions of lower regions, retains, through innumerable years, his habits and his rights. While a multitude of changes has remoulded the people of Europe, while languages, and laws, and dynasties, and creeds, have passed over it like shadows over the landscape, the children of the Celt and the Goth, who fled to the mountains a thousand years ago, are found there now, and show us in face and figure, in language and garb, what their fathers were; show us a fine contrast with the modern tribes dwelling below and around them; and show us, moreover, how adverse is the spirit of the mountain to mutability, and that there the fiery heart of freedom is found for ever.

METAPHYSICS OF BUSINESS.



WE hear much of various circumstances affecting business in this busy country, but few ever dream of its being liable to one influence, greater perhaps than all the rest put to-

gether—the workings of human nature.

In the opening of the year, there is an excitement of the hopeful and cheerful sentiments, under which we are more disposed to speculation and adventure. The decline of the year, on the contrary, raises melancholy and timorous sentiments; we then feel inclined to draw into our shells and wait for brighter days: speculation has no charms for us. In the one case we are under the influence of hope; in the other, of cautiousness. It would almost, indeed, appear as if we were, in this respect, subject to laws similar to those which affect birds and other lower animals, causing them to exhibit no active industry except in spring. It is only when we have a future bright before us, that our energies are fully roused.

These feelings are seen exercising a most potent control over the state of markets, and in all adventurous kinds of business. These things are notably oscillatory; and this is simply because hope and cautiousness take command over us in an alternating manner. The natural procedure of the two feelings is this; for a time after an experience of evil or a threat of danger, cautiousness is predominant. Gradually, after a cessation of these experiences, we forget them. Cautiousness is lulled; hope and confidence again awaken; and these go in increasing activity, till danger and evil once more supervene, and then they give way in a moment to revived cautiousness. Thus it is that for some time after such a "crash" as that of 1837, speculations are held in universal dread; so that even a really promising one would be shunned. But by-and-by the sufferings and losses are forgotten. Men begin to touch and taste, and finding no immediate harm, they at length take whole mouthfuls. Hope gets into full

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commission, *vice* cautiousness retired, and then we see the most visionary schemes eagerly embraced, where recently the most plausible and prudent would have been repudiated. A "crash," with its distressing consequences in the ruin of individuals, and embarrassment of general business, finally lays hope once more so completely prostrate, that for years men can not be induced to venture even on the fairest chances. The rise or fall of prices in all affairs admitting of the least speculation, is governed by the same principle. A little rise from just causes excites hope, under whose influence a further and unwarranted rise takes place. While the progress in this direction remains unchecked by any external cause, all is sanguine expectation in the mercantile mind. No one seems to have the least conception of a possible reverse. Everybody wishes to buy from everybody. Reason has nothing to do with it: it is a mere sentiment which is at work. But let the slightest prognostic of a *turn* come into view, and in an instant the hopeful feeling sinks like a punctured wind-bag. A panic supervenes, and things never rest till they are as much below the fair and reasonable point as they were formerly above it. Have we not here, also, nearly the whole philosophy of what are called "bad times?" Manufacturers go on for a while producing a particular article with the greatest diligence, as if they believed that mankind were in danger of some tremendous inconvenience for want of it. This enthusiasm in (we shall say) cotton finds at length a slight check. In an instant the manufacture ceases, the works are stopped, the workmen are thrown idle. For months there seems to reign over the country a dreary conviction that mankind are never to require cloth any more. Now it was neither true at first that mankind were in any pressing need of particular goods, nor that now they have abjured all further use of them. They use them in a regular monotonous manner, and will evermore do so. The irregularity is in the mental impulses of the producers. These men happen to regard their wares with alternative paroxysms of hope and despair. The consequence is that at one time a factory is put to top speed, and the

workmen are tempted by high wages to exceed the proper hours of labor, in order to produce a good deal more cloth than the public has immediate use for, while at another, the whole system is laid utterly idle because men somehow feel a heavy market as an indication that the world is at an end. Hence arise most important results in our social economy.

How absurd to suppose business men to be prosaic and over-sober of mind! They are the greatest sentimentalists that breathe.

We must now consider another portion of our subject.

Accustomed as we are in this country to see almost every person engaged in some kind of business or craft, we are apt to suppose it the natural and ordinary state of mankind. But some nations that are by no means uncivilized work extremely little. The Turks, for example, are an indolent people. Powerless, handless, they spend the whole day in perfect vacuity, apparently never giving themselves the least concern about the means of subsistence. And yet, somehow, the Turks live. All the people along the south of Europe are comparatively inert. The *Dolce Far Niente* is the prevalent taste of the Mediterranean nations. The striking distinction of the Englishman and American in this respect seems to be in a certain anxiety about the welfare of himself and his family. He starts in life with an awful sense of the necessity of getting on in the world. He will, with the greatest coolness, commence a business which he knows will require his being a daily and nightly slave for thirty years, undreaming that he is making any extraordinary sacrifice. He sees ages of bill-troubles before him, but looks upon it all as a matter of relentless destiny. Even when the first claims of his sense of duty have been fulfilled, and he knows he is safe from poverty for life, he works on for the love of working, rather than walk into a system of idleness which would present to him no enjoyable advantages. Now, who ever heard, in the literature or history of any nations away from central Europe and the United States, of such a thought predominating among them as the necessity of getting on in the

world? They are not, in general, altogether idle. They till, and weave, and fabricate, in a way which seems to be sufficient for their wants; but they are totally unacquainted with that system of close and incessant toiling after increase of goods, which appears to be the first law of existence among us. It must also be remembered that we know of the world having existed for centuries upon centuries, before it exhibited *anywhere* an example of this passionate attachment to workshop, counter, and desk. There was no shop-keeping worth speaking of in ancient Greece or Rome. Factories existed not among the Ptolemies. While the crusades swept across Europe, there were few men calling themselves merchants in London, Paris, or Venice. It is since the close of the middle ages that men have raised into vogue the idea that business is the sheet-anchor of individuals and of nations. There is thus a great difference from past time to present, as well as from other nations to us. This shows fully, we think, that business is not a thing necessary or unavoidable to our human nature. It can be no special result of certain faculties which have no other purpose or mode of action. Yet this is what we might suppose, if we were to see nothing in business but the gratification of the working or fabricating faculty, and of the love of gain. It therefore appears that the love of action and excitement, is what chiefly animates the hard-working nations, being the same impulse which once gratified men in war and in the chase, and still leads the born wealthy to the turf and the gaming-club. It is but the phase in which the mass of manly power and endowment appears in modern civilized nations. And accordingly trade has its heroes and conquerors as well as history.

The view which we are disposed to take respecting the benevolence of business, accords with this idea as to their main ends being, after all, but the gratification of certain mental faculties. To appearance there is nothing but selfishness regarded in business, and if the pursuit of his own end by each individual conduces, as Adam Smith endeavors to show, to the general weal, it is no praise to the motives of particular parties. But the worship of

fortune in reality involves no necessary subjection of the heart to selfishness. The fact is, that where business exists on a considerable scale, its votaries act under two opposite and apparently irreconcilable principles: in purely business matters, they are keen and inflexible, ever disposed to exact the whole of their rights; in domestic and social matters, they may be at the same time bountiful and conceding to a surprising degree. Meet them upon a bargain, and you would think them stern, and wrapped up in views of their own interest. See them next day in private, and you discover that they use their wealth with a generosity that shows they are far from loving it for its own sake. We have here a consideration which seems to take much from the force of those writings which hold up the present as an age of Mammon-worship. The following of Mammon is a fact in itself; but it ought to be taken in connexion with other circumstances, by which its effects are much modified. Our ruling *competitive* principle unquestionably calls out emulation and worse passions; but these are softened by the humanity and largeness of soul which are conspicuous features of the mercantile mind in all above the struggling classes. We are not, let it be fully understood, inclined to believe that the present plan is the best conceivable for the subsistence of nations. We thoroughly believe that, in time, such great bodies of people will feel and act more as only a large kind of families, and enjoy almost, if not altogether, in common the fruits of the general industry, finding that thereby they realize greater enjoyments than are to be obtained by each standing upon his individual acquisitiveness. All this may be unhesitatingly admitted, and yet we will say that the present system is far less selfish than is generally supposed, seeing that selfishness is the rule only in a certain routine of transactions so monotonous as almost to be a complete abstraction, while the kindly social affections in reality prevail over, and give character to the ordinary demonstrations of the individual.

We have here merely broken ground in a subject which appears to us to possess great interest. We willingly leave to oth-

olves no necessary part to selfishness. e business exists on s votaries act under arently irreconcilably business matters, exible, ever disposed their rights; in do- ters, they may be at nl and conceding to Meet them upon a d think them stern, ews of their own in- xt day in private, and ey use their wealth shows they are far own sake. We have hich seems to take e of those writings present as an age of The following of itself; but it ought xion with other cir- h its effects are much g competitive princi- als out emulation and t these are softened d largeness of soul ous features of the all above the strug- are not, let it be fully t to believe that the est conceivable for the ons. We thoroughly, such great bodies of d act more as only a ies, and enjoy almost, common the fruits of, finding that thereby r enjoyments than are ach standing upon his reness. All this may mitted, and yet we will system is far less sel- ally supposed, seeing the rule only in a cer- sactions so monotonous complete abstraction, social affections in re- and give character to nstrations of the indi

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ers to investigate it more deeply, and place the matter in all the various lights in which it may be contemplated. Meanwhile, some of these speculations may be brought home to men's bosoms. It is very obvious that the interests of a vast body of people—of that class generally who live by labor—are involved to a serious extent in a briskness and dulness of business. It is of importance for them to be aware that, so long as the competitive mode endures, the amount of their incomes, and even the question whether they shall have an income at all or not, depend upon the extent to which the faculty of hope is active in the brains of the employing class. So long as employers are sanguine as to markets and results of mercantile combinations, the horde of the industrious are safe; let the tide turn—and its ebb is as sure as its flow—and a large proportion of this huge multitude must cease to be employed. The fact of hundreds of thousands of people being thus withheld at any time from a penury verging upon and often trenching upon pauperism, only by the afflatus of an accidental sentiment in the minds of another portion of the community, is one of those great problems of modern times at which the wisest are the most apt to stand aghast. It is surely by no means creditable to our national sagacity, that we should contentedly see times of prosperity thus go on to the inevitable breakdown, when thousands upon thousands are sure to be thrown into misery, and yet believe it all to be in the fair and proper course of things. No provision by the industrious themselves for the day of certain evil; no arrangement by the sage and politic for softening the blow when it comes; no lesson for the future taken from the past; and, above all, no whispered alarm into any mind as to the soundness of the social plans which involve such tremendous calamities. Verily, we are yet children acting upon our first instincts, and the manhood of man—the time of reason and true brotherly kindness—seems yet far off.

THE greatest and the most amiable privilege which the rich enjoy over the poor, is that which they exercise the least—the privilege of making them happy.

THE LÄMMERGEYER, OR BEARDED VULTURE.



HIS fine bird, which equals or exceeds the largest eagle in size, is found throughout the whole of the great mountain chains of the Old World, being in fact, though not anywhere numerous, very widely dispersed. It occurs in the Pyrenees, and in the Alps of Germany, and Switzerland, where it is notorious for its destructiveness among the lambs and kids which are fed on the green slopes of the lower ranges.

The intermediate situation assigned to the Lämmergeyer, and which is aptly expressed in the generic appellation *gypætus* (a Greek compound designating a vulture and an eagle), is clearly indicated in its form and general habits. Of a powerful and robust make, it has neither the bill nor the talons of the eagle, the former being elongated, and hooked only at the top, and the latter comparatively small and feeble; nor has it an exclusive appetite for blood, carrion and putrid animals being greedily devoured by it. The eagle bears off his prey—the Lämmergeyer seldom attempts to remove it, but devours it on the spot; indeed, his grasp is too feeble to permit him to manage effectually any but a trifling weight. Attracted by the carcass of some unfortunate animal which has perished among the ravines of the mountains, a number of these birds gradually congregate to share the booty, and gorge like the vulture to repletion. The Lämmergeyer, however, does not confine himself to putrid flesh, but attacks lambs, kids, and the weak and sickly of the flocks with great ferocity; the strong-limbed chamois is not secure, nor when rendered desperate by hunger will the ravenous bird forbear an attack on man. Children, indeed, are said to have often fallen sacrifices to its rapacity. Young or small animals are easily destroyed, for though elongated, the beak is hard and strong, and well adapted for lacerating the victim; but larger animals, instead of being at once grappled with, are, as it is said, insidiously assaulted while upon the edge



The Lammergeyer, or Bearded Vulture

of some precipice or steep declivity, the bird unexpectedly sweeping upon them with fury, and hurling them into the abyss down which it plunges to glut its appetite. As illustrative of the boldness of the lammergeyer, Bruce relates that, attracted by the preparations for dinner, which his servants were making on the summit of a lofty mountain, a bearded vulture slowly made his advances to the party, and at length fairly seated himself within the ring they had formed. The affrighted natives ran for their lances and shields, and the bird, after an ineffectual attempt to abstract a portion of their meal from the boiling water, seized a large piece in each of his talons from a platter that stood by, and carried them off slowly along the ground as he came. Returning in a few minutes for a second freight he was shot.

There is little in the general aspect of this bird to remind one of the vulture, and yet the character of the head, and the general contour of the body, are strikingly different from those of the eagle; there is a want of dignity and quiet grandeur in its attitude, and the glance of its red eye, though keen and cruel, is deficient in that expression of daring and resolution which we admire in the feathered monarch. The bristly beard which depends from the lower mandible, tends also to give a peculiar character to its physiognomy. Of the nidification of the lammergeyer little is ascertained, except that it selects the most inaccessible pinnacles as the site of its eyry; Pallas states that it is known to breed on the high rocks of the great Altaic chain, and beyond the lake Baikal.

In length this extraordinary bird measures about four feet from the bill to the end of the tail, and from nine to ten in the expanse of its wings. Larger admeasurements have been given by various writers, which are probably exaggerated—none of the numerous specimens which we have seen exceeding our statement.

The tarsi are short and almost hidden by the feathers of the thighs; the iris is bright red; the wings are ample, the second and third quill feathers being the longest; the tail is graduated; the head is clothed with feathers, and from the sides of the under mandible proceeds a

row of black bristles, which form a beard or pencil at its angle, and a layer of similar bristles, beginning at the eye, covers the nostrils. The general color of the upper surface is dark grayish brown, the centre of each feather having a longitudinal dash of white. The neck and the whole of the under surface are white, tinted with reddish brown. The young birds are darker in the general hue of their plumage than the adult, and the white spots are larger and less defined; in this stage it has been mistaken for a distinct species.

NOVEMBER.



NOVEMBER, like the two preceding months, is derived from two Latin words, when its station in the Roman calendar rendered its derivation more appropriate: by the

Saxons it was termed *Wint-monat*, in allusion to the winds that frequently prevail at this season.

As the preceding month was marked by the change, so this is distinguished by the fall of the leaf. This last is so striking a circumstance, that the whole declining season of the year is often, in common language, named the fall. There is something extremely melancholy in this gradual process, by which the trees are stripped of all their beauty, and left so many monuments of decay and desolation. The first of poets has deduced from this quick succession of springing and falling leaves, an apt comparison for the fugitive races of men:—

"Like leaves on trees the race of man is found,
Now green in youth, now withering on the ground.
Another race the following spring supplies;
They fall successive, and successive rise;
So generations in their course decay;
So flourish these, when those are passed away."
POPE'S HOMER.

This loss of verdure, together with the shortened days, the diminished warmth, and frequent rains, justify the title of the gloomy month of November: and other animals seem to sympathize with man in feeling it as such.

DEATHS OF LITTLE CHILDREN.



GRECIAN philosopher being asked why he wept for the death of his son, since the sorrow was vain, replied, "I weep on that very account." And his answer became his wisdom. It is only for sophists to pretend that we whose eyes contain the fountains of tears need never give way to them. It would be unwise not to do so on some occasions. Sorrow unlocks them in her balmy moods. The first bursts may be bitter and overwhelming; but the soil on which they pour, would be worse without them. They refresh the fever of the soul—the dry misery which parches the countenance into furrows, and renders us liable to our most terrible "flesh-quakes."

There are sorrows, it is true, so great, that to give them some of the ordinary vents is to run a hazard of being overthrown. These we must rather strengthen ourselves to resist, or bow quietly and drily down in order to let them pass over us, as the traveller does the winds of the desert. But where we feel that tears would relieve us, it is false philosophy to deny ourselves at least that first refreshment; and it is always false consolation to tell people that because they can not help a thing, they are not to mind it. The true way is to let them grapple with the unavoidable sorrow, and try to win it into gentleness by a reasonable yielding. There are griefs so gentle in their very nature, that it would be worse than false heroism to refuse them a tear. Of this kind are the deaths of infants. Particular circumstances may render it more or less advisable to indulge in grief for the loss of a little child; but, in general, parents should be no more advised to repress their first tears on such an occasion, than to repress their smiles toward a child surviving, or to indulge in any other sympathy. It is an appeal to the same gentleness; and such appeals are never made in vain. The end of them is an acquittal from the

harsher bonds of affliction—from the tying down of the spirit to one melancholy idea.

It is the nature of tears of this kind, however strongly they may gush forth, to run into quiet waters at last. We can not easily, for the whole course of our lives, think with pain of any good and kind person whom we have lost. It is the divine nature of their qualities to conquer pain and death itself; to turn the memory of them into pleasure; to survive with a placid aspect in our imaginations. We are writing at this moment just opposite a spot which contains the grave of one inexpressibly dear to us. We see from our window the trees about it, and the church spire. The green fields lie around. The clouds are travelling over head, alternately taking away the sunshine and restoring it. The vernal winds, piping of the flowery summer-time, are nevertheless calling to mind the far-distant and dangerous ocean, which the heart that lies in that grave had many reasons to think of. And yet the sight of this spot does not give us pain. So far from it, it is the existence of that grave which doubles every charm of the spot; which links the pleasures of our childhood and manhood together; which puts a hushing tenderness in the winds, and a patient joy upon the landscape; which seems to unite heaven and earth, mortality and immortality, the grass of the tomb and the grass of the green field, and gives a more maternal aspect to the whole kindness of nature. It does not hinder gayety itself. Happiness was what its tenant, through all her troubles, would have diffused. To diffuse happiness, and to enjoy it, is not only carrying on her wishes, but realizing her hopes; and gayety, freed from its only pollutions, malignity and want of sympathy, is but a child playing about the knees of its mother.

The remembered innocence and endearments of a child stand us instead of virtues that have died older. Children have not exercised the voluntary offices of friendship; they have not chosen to be kind and good to us, nor stood by us from conscious will in the hour of adversity. But they have shared their pleasures and pains with us as well as they could; the

interchange of good offices between us has, of necessity, been less mingled with the troubles of the world; the sorrow arising from their death is the only one which we can associate with their memories. These are happy thoughts, that can not die. Our loss may always render them pensive, but they will not always be painful. It is a part of the benignity of nature, that pain does not survive like pleasure, at any time, much less where the cause of it is an innocent one. The smile will remain reflected by memory, as the moon reflects the light upon us, when the sun has gone into heaven.

When writers like ourself quarrel with earthly pain (we mean writers of the same intentions, without implying, of course, anything about abilities or otherwise), they are misunderstood if they are supposed to quarrel with pains of every sort. This would be idle and effeminate. They do not pretend, indeed, that humanity might not wish, if it could, to be entirely free from pain; for it endeavors at all times to turn pain into pleasure, or at least to set off the one with the other; to make the former a zest, and the latter a refreshment. The most unaffected dignity of suffering does this; and, if wise, acknowledges it. The greatest benevolence toward others, the most unselfish relish of their pleasures, even at its own expense, does but look to increasing the general stock of happiness, though content, if it could, to have its identity swallowed up in that splendid contemplation. We are far from meaning that this is to be called selfishness. We are far indeed from thinking so, or of confounding words. But neither is it to be called pain, when most unselfish; if disinterestedness be truly understood. The pain that is in it softens into pleasure, as the darker hue of the rainbow melts into the brighter. Yet even if a harsher line is to be drawn between the pain and pleasure of the most unselfish mind (and ill health, for instance, may draw it), we should not quarrel with it, if it contributed to the general mass of comfort, and were of a nature which general kindness could not avoid. Made as we are, there are certain pains without which it would be difficult to conceive certain great and overbalancing pleasures.

We may conceive it possible for beings to be made entirely happy; but in our composition, something of pain seems to be a necessary ingredient, in order that the materials may turn to as fine account as possible; though our clay, in the course of ages and experience, may be refined more and more. We may get rid of the worst earth, though not of earth itself.

Now the liability to the loss of children—or rather what renders us sensible of it, the occasional loss itself—seems to be one of those necessary bitters thrown into the cup of humanity. We do not mean that every one must lose one of his children, in order to enjoy the rest; or that every individual loss afflicts us in the same proportion. We allude to the deaths of infants in general. These might be as few as we could render them. But if none at all ever took place, we should regard every little child as a man or woman secured; and it will easily be conceived what a world of endearing cares and hopes this security would endanger. The very idea of infancy would lose its continuity with us. Girls and boys would be future men and women, not present children. They would have attained their full growth in our imaginations, and might as well have been men and women at once. On the other hand, those who have lost an infant, are never, as it were, without an infant child. They are the only persons who, in one sense, retain it always; and they furnish their neighbors with the same idea. The other children grow up to manhood and womanhood, and suffer all the changes of mortality. This one alone is rendered an immortal child. Death has arrested it with his kindly harshness, and blessed it into an eternal image of youth and innocence.

Of such as these are the pleasantest shapes that visit our fancy and our hopes. They are the ever-smiling emblems of joy; the prettiest pages that wait upon imagination. Lastly, "of these are the kingdom of heaven." Wherever there is a province of that benevolent and all-accessible empire, whether on earth or elsewhere, such are the gentle spirits that must inhabit it. To such simplicity, or the resemblance of it, must they come. Such must be the ready confidence of

their hearts, and creativeness of their fancy. And so ignorant must they be of the "knowledge of good and evil;" losing their discernment of that self-created trouble, by enjoying the garden before them, and not being ashamed of what is kindly and innocent.

PETRIFIED CASCADE OF PAMBOUK KALESI.



THE petrified cascade of Pambouk Kalesi, as it is called by the Turks, is situated in Hierapolis, Asia Minor. The country around exhibits decided marks of violent volcanic action. Nearly the whole district of the Mæander is liable to earthquakes, and is burrowed under by channels full of fire and water as far as the interior of the country. The whole western part of Asia Minor is full of thermal springs; they are found also at Brusa, near the range of the Olympus. The rivers also are loaded with calcareous sediment, and, like the streams of other countries where limestone prevails, are found unfit for drinking. The singular effect of this cascade is produced by the rapid deposition of calcareous matter. Dr. Chandler has given the following description of it:—

"The view of the petrified cascade was so marvellous, that the description of it, to bear even a faint resemblance, ought to appear romantic. The vast slope, which at a distance we had taken for chalk, was now beheld with wonder, it seeming an immense frozen cascade, the surface wavy, as of water at once fixed, or in its headlong course suddenly petrified. Round about us were many high, bare, stony ridges; and close by our tent one with a wide basis, and a slender rill of water, clear, soft, and warm, running in a small channel on the top. A woman was washing linen in it, with a child at her back; and beyond were cabins of the Turcomans, standing distinct, much neater than

any we had seen; each with poultry feeding, and a fence of reeds in front.

"It is an old observation that the country about the Mæander, the soil being light and friable, and full of salts generating inflammable matter, was undermined by fire and water. Hence it abounded in hot springs, which, after passing under ground from the reservoirs, appeared on the mountains, or were found bubbling up in the plain, or in the mud of the river.

"The hot waters of Hierapolis have produced that most extraordinary phenomenon, the cliff, which is one entire incrustation. They were anciently renowned for this species of transformation. It is related they changed so easily, that being conducted about the vineyards and gardens the channels became long fences, each a single stone. They produced the ridges by our tent. The road up to the ruins, which appears as a wide and high causeway, is a petrification; and overlooks many green spots, once vineyards and gardens, separated by partitions of the same material. The surface of the flat above the cliff is rough with stone and with channels, branching out in various directions; a large pool overflowing and feeding the numerous rills, some of which spread over the slope, as they descend, and give to the white stony bed a humid look resembling salt or driven snow when melting. This crust, which has no taste or smell, being an alkaline, will ferment with acids; and Pichenini relates that trial of it had been made with spirit of vitriol. The waters, though hot, were used in agriculture."

That the inhabitants of Hierapolis were proud of their city is indicated by one of the inscriptions copied by Chandler from the walls of the ruined theatre, and which he thus translates: "Hail, Hierapolis, golden city, the spot to be preferred before any in wide Asia; revered for the rills of the nymphs; adorned with splendor."—"The nymphs," adds Dr. Chandler, "presided over springs and fountains." Hierapolis is described by Laborde as "situated on a plateau (platform, or table-land) detached from the chain of mountains which separates the valley of the Gallus from the chain of the Mæander, and which rises to a great height toward

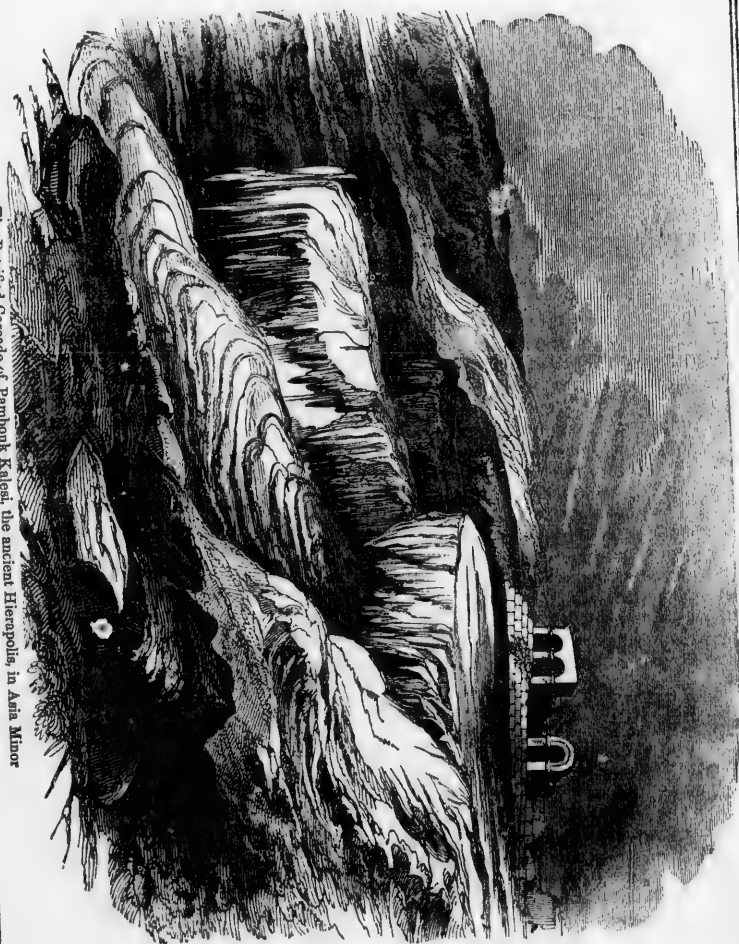
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The Petrified Cascade of Pambock Kalei, the ancient Hierapolis, in Asia Minor



the centre of the country. A copious spring flows in the middle of the plateau, and, directed by little canals which still retain their ancient use, is lost in the plain, after having traversed the town, and formed the cascades upon the side of the rocks. The cascades are represented with their character of petrification or stalactite." The name of Pambouk Kalesi (the fortress or castle of cotton) has been given from the white aspect of the cascades.

STRAY THOUGHTS ON THE BEAUTIFUL.



It is a much more easily performed task to draw a correct picture, in all its details, of a landscape in nature or a scene in human life, embodying a beauty or a defect, than, separating them from the framework in which they are set, to give an abstract and general definition of either. However cognizable at first sight a quality or a power may be, when displayed *in esse*, so inextricably blended is matter with all our habitudes of thought, that it seems as necessary to the formation of a mental conception as to the exercise of our corporeal functions. Mental and physical are coupled in our nature, strangely but strongly; and etherialists on the one hand, and materialists on the other, grumbling as they list, on they must jog together, mingling here, diverging there, till the final separation come. The most efficient handmaid of pure intellect is a frequent reference to things external; and puzzled though it may be in its unaided self, to form a conception of a something it knows to exist, but can not anatomize, a glance at the difficulty, as developed passively or actively, will afford all that is needed, better and in a more tangible form, than after the expenditure of the labors of a schoolman. Thus, in the endless attempts at a definition of the abstract beautiful, how various the theories propounded, how

absurd the ingenuities uttered! One philosopher seeks its mystical home in a certain definite combination of lines and curves, which he gravely lays down with mathematical precision; a second differs from the former in some of his conformation, and proceeds as gravely to defend his doctrine; while a third, disagreeing with both, is inclined to place it in an indefinable harmony or adaptation between the spectator and the spectacle—the objective and the subjective. Whether, according to the last theory, distortion is to be viewed as beauty in the abstract, because it appears perfection to the individual eye, or whether the opinion of the majority is to decide this point, we shall leave to others to determine, and proceed to make two or three rambling remarks on some of the objects in which, we opine, the mass of our unmystified readers will discover beauty, albeit they dissect not their lines and curves.

The first and most natural quarter in which we would seek for an illustration of the beautiful is in the inanimate world; and the search will not be in vain. All praise be to Him who created this glorious universe—the green earth, the blue heavens, and the silvery stars! On the mountain's summit, or in the still valley—on the ocean's shore, or on the richly cultivated plain—the manifestations of beauty are apparent, and confront the beholder at every turn. In casting the eye over a scene such as poets love—where "water-falls leap amid wild islands green," and sunshine mingles with leafy shade—where the air is ringing with a thousand songs, inarticulate but eloquent—where the emerald slope melts gradually into the dim blue of the distant hill—we become instantaneously impressed with a sensation of delight, and, heedless in which of the elements of the picture the charm lies, or whether, if one were removed, our admiration would be diminished, we acknowledge that herein is loveliness—herein we have a definition of beauty from nature's own vocabulary. Who can measure the humanizing influence of the contemplation of such scenes? Yet it is not in the aggregate alone that this quality is found; for the wing of the butterfly or the petal of the tiniest flower displays its existence

as truly, though with a less striking effect, as the wide-spread and complicated prospect. Storms have their beauty, their grandeur, their sublimity; and could that strong antagonistic feeling which we all possess, in the fear of personal danger, be subdued, doubtless their contemplation would be as grateful as that of milder scenes. Silence also has her charm as well as sound; and at times—when, in the sleep of nature, the world seems voiceless, and the eye, the only organ of sense which can convey impressions to the inner being—a calmly joyous thrill pervades the soul, such as the sweetest music never poured upon the Sybarite. That the quality of which we speak exists in all the works of God, can not for a moment be doubted; but it is to be found in varying degree in different objects; and thus, by contrast, the effect of its abundant presence is heightened—sunshine for cloud—the oasis for the desert—"Beauty for ashes."

There is a beauty general and a beauty individual, or particular. Certain scenes are of such a description as at once to excite in the bosoms of spectators, constituted as ordinary mortals, emotions of delight—they overpower, they silence, they lead admiration captive. To the Englishman and to the native of some foreign clime, they, upon the universal principles of human nature, appear equally beautiful—the vale of Tempe would present the same attractions to the visiter of to-day as it did to him of generations ago. Another scene, again, has a local aptitude to the individual beholder; and though inferior to many in charms, or destitute of charms altogether, yet in his eye earth holds in her bosom no spot half so lovely. Some little incident in his isolated history, investing with a soul each feature of the landscape, changes his estimate, and endears it all. The favored inhabitant of the sunny south sees not more beauty in his blossomy land, than does the Norseman in his sterile shores and pine-clad mountains.

There is a beauty composite. It consists not in association alone—not in the aspect of the scene alone—not in the adventitious circumstances of the time alone. Take an illustration. Let us suppose that we are visiting some goodly gothic

cathedral, which has long since ceased to echo with chant or hallelujah. The floor is covered with epitaphs of warriors, and our feet are standing upon the tombs of the mighty. The architecture is magnificent, and in such a state of preservation as to have gained the hallowed charm of antiquity at the expense of none of its beauty; while the statues of armed knights stand here or there marking their last resting-places. The pale moon is throwing her silvery light through the massive and now unglazed window, softening the roughness of the angles, and imparting a witching effect to the scene. We are at once impressed with delightful awe, and pronounce it beautiful. In what does it consist? Not in association alone; for were the process of decay somewhat further advanced, the influence of association, though still as powerful, would not suffice to call up the same pleasurable feeling. Not in the naked aspect of the scene alone; for that, without something more, would give but a soulless delight, while, in adventitious circumstances, no innate charm can lie. Search, ye wise men, and tell wherein consists the element of beauty! Thanks be to God, the peasant can feel its power, though unaided by philosophy.

There is a beauty in all the living works of the Creator—in bird, and beast, and creeping thing—but most is there in man. Ay, in him that powerful contrast to which we have alluded has full play: man's garb is motley. If the display of his light require the antagonism of shade, there is assuredly little lack! In his person, philosophers tell us that we have the perfection of physical beauty; in his intellectual powers we have the highest culmination of that something which is not matter; while, even in his moral constitution, are to be found gleams of sunshine—fitful, indeed, yet only on that account the more to be prized. There is a beauty in the march of the man who, returning amid the glad welcomings of thousands from effecting his country's deliverance, and crowned with the garlands of victory, is content with the tribute of a nation's gratitude. And there is a beauty, too, in the noiseless course of the humble child of poverty, as he wends his way onward through life, holding fast his integrity despite the

temptations of want, which beset him at every step. There is a beauty in the character of the moralist, who enunciates high problems pregnant with interest to society, and who casts generously upon the world the products of his great mind, replete with instruction and refinement to mankind—legacies inexhaustible, universal. And there is a beauty, too, in the walk of the simple peasant, who, with his Bible in his hand, strives in all things to conform in his conduct to the will of the Supreme, and, unlearned though he be, yet knows enough to make him love his neighbor as himself. There is a beauty in the merry laugh of light-hearted youth, as yet untainted by guile, and fresh as a May morning. There is a beauty also in the holy tear of the stricken penitent, which tells of the casting out of the evil spirit.

There is a beauty in woman. Smile not, most gallant reader, at this sapient truism. The rank heresy of even for a moment imagining that a fact, indubitable as the personal charm of woman is, can require affirmation, we mean not to be guilty of—it is of her moral attractions we now speak. The power of the female character for good who can estimate! the number of woman's melting charities, in the palace and in the cottage, who can count! Truly was she formed an help meet unto Adam—smoothing asperity, lightening sorrow, gladdening joy—a personification of the beautiful, the contemplation of which corrects, elevates, refines. Whether it be the ivory brow circled with sparkling diadem, or the sunburnt forehead wreathed with rushes from the brook, the impress of beauty is there, reflecting the moral loveliness that dwells within.

Gaze we upon the works of man? Even there is to be found ample food for admiration. Not alone in the stupendous pyramids, seemingly the memorials of conjoint power and folly—not alone in the most finished edifices of stateliest architecture—nor in the classic productions of master pencils—nor in the bright compositions of inspired minds, is beauty to be discovered; but in every mossgrown ruin and tenantless hall are gems to be met with—flowers with fruits, the admira-

ble with the admonitive. We might proceed to enumerate beauty in a thousand shapes in nature, in art, in man's moral being, but we refrain. All the glory of this earth, and of what it contains, is but a mirrored reflection, not an innate quality. In the sunshine of its Creator's smile, it wears a pleasing aspect, and, in the words of old Spenser, let it be:—

"That, with the glory of so goodly sight,
The hearts of men, that fondly here admire
Fair-seeming shows, and feed on vain delight,
Transported with celestial desire
Of these fair forms, may lift themselves up higher,
And learn to love, with patient, humble duty,
The Eternal Fountain of that heavenly beauty."

THOUGHTS ON WINTER.



OETS have numbered among the felicities of the golden age an exemption from the change of seasons, and a perpetuity of spring; but we think that they have not made sufficient provision for that insatiable demand for new gratifications which seems particularly to characterize the nature of man. Our sense of delight is in a great measure comparative, and arises at once from the sensations which we feel, and those which we remember. Thus ease after torment is pleasure for a time, and we are very agreeably recreated when the body, chilled with the weather, is gradually recovering its natural tepidity; but the joy ceases when we have forgotten the cold; we must fall below ease again, if we desire to rise above it, and purchase new felicity by voluntary pain. It is therefore not unlikely, that however the fancy may be amused with the description of regions in which no wind is heard but the gentle zephyr, and no scenes are displayed but valleys enamelled with unfading flowers, and woods waving their perennial verdure, we should soon grow weary of uniformity, find our thoughts languish for want of other subjects, call on heaven for our wonted round of seasons, and think ourselves liberally recompensed for the inconveniences of summer and

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Every season has its particular power
of striking the mind. The nakedness and
asperity of the wintry world fill the be-
holder with pensive and profound aston-
ishment; as the variety of the scene is
lessened, its grandeur is increased; and
the mind is swelled at once by the mingled
ideas of the present and the past—of the
beauties which have vanished from the
eyes, and the waste and desolation that
are now before them.

Yet let us reflect on the blessings Heaven
grants us at this season, which appears to
us so severe. The frost and cold prevent
many hurtful vapors in the higher regions
of the atmosphere from falling upon us,
and even purify the air. Far from being
always bad for our health, it often strength-
ens it, and preserves the humors from
putrefaction, which a constant heat would
certainly occasion. If the vapors which
collect in the atmosphere were always to
fall in rain, the earth would be too soft
and wet, our bodies would be too full of
humors and too much relaxed; whereas
the cold braces and promotes the circula-
tion of the blood. In very hot countries,
and where the winters are rainy and wet,
serious and mortal diseases are much
more frequent than elsewhere. We are
told by travellers, that in Greenland, where
the ground is covered with mountains of
ice, and where, in winter, the days are
only four or five hours long, the air is
very wholesome, clear, and light; and
except a few complaints in the chest and
eyes (occasioned partly by the quality of
the food), they have seldom there the
disorders so common in Europe. It is
also certain that the constitution of the
human body varies according to the dif-
ferent climates; consequently the inhabit-
ants of the northern countries have con-
stitutions adapted to extreme cold, and are
generally strong and robust. As man,
though active by choice, and though labor
is necessary to him, is still glad to inter-
rupt his employments to taste the sweets
of sleep; so also nature yields to the
change of seasons, and takes a pleasure
in it, because, in reality, it contributes
toward our welfare and happiness. Al-

though our fields and gardens be buried
in snow, this is necessary, in order to
preserve them from the cold, as well as
to prevent the grain from corrupting. The
ground requires rest after having yielded
in the summer all that we want for the
winter. If our present wants had not
been provided for; if in this severe season
we were obliged to cultivate the earth,
there might be some foundation for our
complaints. But provision is made for
these; they are all supplied, and we enjoy
a repose suitable to the season.

To these advantages let us add what
has frequently been remarked, and is al-
ways very pleasantly felt, that winter has
been celebrated as the proper season for
merriment and gayety. We are seldom
invited by the votaries of pleasure to look
abroad for any other purpose than that we
may shrink back with more satisfaction to
our coverts, and, when we have heard the
howl of the tempest and felt the gripe of
the frost, congratulate each other with
more gladness upon a close room, an easy
chair, a large fire, and a smoking dinner.
Winter brings natural inducements to jol-
lity and conversation. Differences, we
know, are never so effectually laid asleep,
as by some common calamity. An enemy
unites all to whom he threatens danger.
The rigor of winter brings generally to
the same fireside those who, by the op-
position of inclinations, or difference of
employment, moved in various directions
during the other parts of the year; and
when they have met, and find it their
mutual interest to remain together, they
become endeared to each other by mutual
compliances, and often wish for the con-
tinuance of the social season, with all its
bleakness and all its severities.

Dr. Johnson has remarked an advantage
of winter, which men of his stamp will
feel with peculiar energy, and it is cer-
tainly founded on truth. "To men of
study and imagination," says he, "the
winter is generally the chief time of labor.
Gloom and silence produce composure of
mind and concentration of ideas; and the
privation of external pleasure naturally
causes an effort to find entertainment with-
in. This is the season in which those
whom literature enables to find amuse-
ments for themselves have more than com-

mon convictions of their own happiness. When they are condemned by the elements to retirement, and debarred from most of the diversions which are called in to assist the flight of time, they can find new subjects of inquiry, and preserve themselves from that weariness which hangs always flagging upon the vacant mind."

The winter, however, differs very essentially in some countries. If we feel ourselves disposed to complain, let us consider the following facts, which relate to a great part of those nations, which have neither spring nor autumn. The heat is as intolerable in summer as the cold is in winter. The severity of the latter is such that the spirits of wine in the thermometer freeze. When the door of a warm room is opened, the outward air which comes in turns all the vapors into snow, and they appear like thick white clouds. If any one goes out of the house, he is almost suffocated, and the air seems to pierce through him. Everything appears dead, as nobody dares to venture abroad. Sometimes the cold becomes so intense all of a sudden that, if they are not saved in time, people are in danger of losing an arm, a leg, or even their life. The fall of snow is still more dangerous; the wind drives it with such violence that nobody can find their way; the trees and bushes are covered with it, the sight is blinded by it, and people sink into precipices at every step. In summer it is constantly light for three months, and in winter it is perpetual night during the same space of time. Those who complain of the cold in our countries, seem not to know our advantages.

Yet we are mistaken if we suppose that the inhabitants of the pole are unhappy from the severity and length of their winter. Poor, yet exempt, through simplicity, from all desires difficult to gratify, those people live content in the midst of the rocks of ice which surround them, without knowing the blessings which the southern nations consider as an essential part of their happiness. If the barrenness of their soil prevents them from having such variety of productions of the earth as we have, the sea is so much the more bountiful in her gifts to them. Their way of

living inures them to cold, and enables them to defy storms. As to particular resources, without which they could not bear the rigor of the climate, nature provides them with abundance. Their deserts are full of wild beasts, whose fur protects them from cold. The reindeer furnishes them with food, drink, beds, clothes, and tents. These are most of their wants, and it costs little trouble to get them supplied. When the sun does not rise with them, they are surrounded with darkness, but nature itself lights a torch for them—the aurora borealis brightens their night. Perhaps these people consider their country as the greatest and happiest upon earth, and may pity us as much as we pity them.

Winter, too, has its moral and religious uses and lessons. There are the winter of adversity, the winter of age, and the winter of the tomb, of all which it speaks and is the emblem. And there is no season in which there are more pressing calls for charity, and none in which the rich ought to feel their own comforts with a gratitude more lively, and be consequently more disposed to exertions in favor of the poor:—

"Sore pierced by wintry winds,
How many shrink into the sordid hut
Of cheerless poverty!
Of these
Thought fond man
The conscious heart of charity would warm
And her wide wish benevolence dilate."

THE COMMONPLACE.



NY person who looks around the circle of his acquaintance, will find at least one individual who passed through the world almost unheeded; for it is most likely his misfortune not to possess any characteristic prominent enough to distinguish him from the rest of mankind. His countenance is so commonplace, that a short walk in any much frequented street will show us at least a half-dozen sets of

features of a similar cast. His height is so very ordinary, that at least thirty per cent. of his fellow-men measure the same number of feet and inches. His shape is neither handsome nor disproportioned. Had, indeed, he been blessed with a deformity, it would have set a mark upon him by which he might have been known from other persons of his own age and status.

Nor is it his outward aspect only which herds an individual of this class with the multitude. There is as little to distinguish him from the mass in his mind as in his person. He has neither ambition nor energy to dart ahead of the crowd. He does exactly as other people do, and would not do anything which other people do not do for the world. He is timid, reserved, and apparently grave. Of conversation he has little, and it requires a strong stimulant to set his tongue in motion: argument is of course quite out of the question with a man who seldom has courage to differ aloud with the most extravagant opinions. Though he never asks questions, he will answer them; but when he does, he is sure to tell you something you know already. As the snail comes out when it is touched, and again retires into its shell, so do the commonplace require to be stimulated by a question ere they will "come out." Having spoken, they shrink back under the crust of conscious insignificance.

Despite all these defects, however, the commonplace are among the most useful members of society, only their usefulness begins where that of more brilliant spirits ends. Feeling their general deficiencies, they court favor by doing what a great many other people decline. In fact it is only their readiness to oblige—their unfailing good-nature, which prevents them from being utterly overlooked and neglected. When, for instance, a party is being made up, Mr. Nobody is added to the list of guests because there is some old lady to see home. He is always ready to carve, so is asked out to dinner now and then. When three persons are inclined to have a game at whist, he is preferred to "dummy;" or when seven want to dance a quadrille, he is asked to join merely because he makes the eighth. He is invited to pic-nics for the sole reason

that his contributions will increase the stock of champagne, and reduce to each paying member of the party a proportion of the general expenses. Besides his uses in these respects, the commonplace man is of signal service at the social board and in the midst of conversation, for this seemingly paradoxical reason; he seldom talks himself. If every convive were a wit, a genius, or a philosopher, there would be no contrast, no relief; like a play, all of whose characters are kings, or a picture, with all lights and no shadows. Hence the commonplace perform an important part in a social tableau; they harmonize contrasts; they are the neutral tints which blend the high lights of intellect with the deep shadows of stupidity. Where there are voluble talkers, they are invaluable; they listen well, and relieve the monotony of a long story by exclamations which encourage the narrator, and which no one else will condescend to make; such as "indeed!"—"really!"—"how strange!"—"remarkable!" with a carefully nursed and very impressive "extraordinary!" for the catastrophe. Again, the commonplace man never winces at a sly jest which may be aimed at him. Indeed he rather likes it—he is delighted to be taken notice of on any terms.

To all rules there are exceptions; and a few of the commonplace make desperate struggles to be known and distinguished from the general herd. Some adopt a conspicuous style of dress; others eccentricity of manners. They often try to disguise the hopeless commonness of their figures by means of odd-shaped hats, many hued waistcoats, and curiously-colored gloves. It has often been a matter of surprise what becomes of certain extraordinary cravats and stocks one sees displayed in hosiers' shops: some of an ultra cerulean blue, spangled all over with gilt stars. Observation, however, will show that they are manufactured for the commonplace, who alone are seen to wear them. Even these expedients are often found to fail, and the victims of Nature's impartiality occasionally call in her aid to help them out of the crowd into which they feel themselves to be so firmly wedged. They let their hair grow to inordinate lengths, coax their whiskers into

to cold, and enables
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very!
fond man

heart of charity would warm
wish benevolence dilate."

COMMONPLACE.

NY person who
looks around the
circle of his ac-
quaintance, will
find at least one
individual who
passed through
the world almost
unheeded; for it
is his misfortune not to possess
any attribute prominent enough to
draw him from the rest of mankind.
He is so commonplace, that
any much frequented street
contains at least a half-dozen sets of

strange shapes, while those who are very bold indeed mount mustaches. In nine cases out of ten, however, not one of these expedients succeed, and even in the title of instances in which the object is gained, the notice attracted is seldom of a flattering kind.

Another extrinsic expedient resorted to by the commonplace is that of taking unto themselves high-sounding Christian names. Whether the extreme prevalence of the name of "Smith" gives rise to the notion, or whether it be a fact, can not be decided; but certain it is, that this popular cognomen and commonplace people are very generally associated. At a random, but moderate computation, at least a moiety of the commonplace are called "Smith." Out of this legion a few of the bolder spirits, scorn the shackles of non-individuality which this name fastens to them, put a preface of prenomes to that which they inherit from their ancestors. This, then, accounts for the frequent occurrence of "Constantine Agrippa," "Mackenzie Mackintosh," "Pelham de Crespigny," and a hundred equally euphonious prefixes, which end like the bathos of an extravagant poem, in the surname "Smith." Upon paper, this expedient answers. So long as the writer of the classical or aristocratic signature keeps out of sight, your imagination is very likely to picture him as something more than common. His high-sounding names make a great effect in advertisements, play-bills, and the prospectuses of joint-stock companies; but once get introduced to him—once stand face to face with him, and the grand associations called up by his Christian names when in print, vanish like the "baseless fabric of a vision." His appearance, manners, and conversation, are perhaps so intensely commonplace, that the only name which it is possible to be suggested to your mind, is that which he in reality bears—Smith.

In truth, all such struggles as those we have described are useless. The really commonplace will be commonplace in spite of the most persevering struggles, so long as these efforts are directed to mere externals. It is only by mental exertion, and the cultivation of intellect, that their emancipation is to be worked out.

LIFE WITHOUT AN AIM.

THOSE of us who are familiar with the shore, may have seen, attached to the inundated reef, a creature, whether a plant or animal you could scarcely tell, rooted to the rock as a plant might be, and twirling its long tentacula as an animal would do. This plant-animal's life is somewhat monotonous, for it has nothing to do but grow and twirl its feelers, float in the tide, or fold itself up on its foot-stalk when that tide has receded, for months and years together. Now, would it not be very dismal to be transformed into a zoophyte? Would it not be an awful punishment, with the human soul still in us, to be anchored to a rock, able to do nothing but spin about our arms or fold them up again, and knowing no variety, except when the receding ocean left us in the daylight, or the returning waters plunged us into the green depths again, or the sweeping tide brought us the prize of a young periwinkle or an invisible star-fish? But what better is the life we are spontaneously leading? What greater variety marks our existence, than chequers the life of the sea-anemone? Does not one day float over us after another, just as the tide floats over it, and find us much the same, and leave us vegetating still? Are we more useful? What real service to others did we render yesterday? What tangible amount of occupation did we overtake in the one hundred and sixty-eight hours of which last week consisted? And what higher end in living have we than that polypus? We go through certain mechanical routines of rising, and dressing, and visiting, and dining, and going to sleep again; and are a little roused from our usual lethargy by the arrival of a friend, or the effort needed to write some note of ceremony. But as it courtesies in the waves, and vibrates its exploring arms, and gorges some dainty medusa, the sea-anemone goes through nearly the same round of pursuits and enjoyments with our intelligent and immortal self. Is this a life for a rational and responsible creature to lead?

If we had no faults ourselves we should not take pleasure in observing those of others.

THOUT AN AIM.

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DECEMBER.



HIS month still re-
tains its original name,
derived from the Latin
words *decem* and *im-*
ber, although its place
in the calendar is dif-
ferent from that ori-
ginally assigned to it.

By our Saxon ancestors it was styled

Winter-monat, i. e. winter-month: upon

their conversion to Christianity, they named

it *Heligh-monat*, or holy-month.

The changes which take place in the
face of nature during this month, are little
more than so many advances in the prog-
ress toward universal gloom and desola-
tion:—

"No mark of vegetable life is seen,
No bird to bird repeats his tuneful call,
Save the dark leaves of some rude evergreen,
Save the lone red-breast on the moss-grown wall."
SCOTT.

The day now rapidly decreases; the
weather becomes foul and cold; and, as
SHAKESPEARE expresses it—

"The rain and wind beat dark December."

Several of the wild quadrupeds now
take to their winter concealments, which
they seldom or never quit during the win-
ter. Of these, some are in an absolutely
torpid or sleeping state, taking no food for
a considerable time; others are only
drowsy and inactive, and continue to feed
on provisions which they have hoarded
up. In our climate few become en-
tirely torpid. Bats do so, and retire early
to caves and holes, where they remain
the whole winter, suspended by the hind
feet, and closely wrapped up in the mem-
branes of the fore feet. As their food is
chiefly insects, they can lay up no store
for the winter, and therefore must be
starved, did not nature thus render food
unnecessary for them. *Dor-mice* also lie
torpid the greater part of the winter, though
they lay up stores of provision. A warm
day sometimes revives them, when they
eat a little, but soon relapse into their
former condition.

Squirrels, and various kinds of field-
mice, provide magazines of food against
winter, but are not known to become
torpid. The badger, the hedgehog, and

the mole, keep close in their winter-quar-
ters in the northern regions, and sleep
away great part of the season.

"Hedgehogs," says Mr. Knapp, "were
formerly an article of food; but this diet
was pronounced to be dry, and not nutri-
tive, 'because he putteth forth so many
prickles.' This little quadruped, upon
suspicion of harm, rolls itself up in a
ball, hiding his nose and eyes in the
hollow of his stomach, and thus the com-
mon organs of perception—hearing, see-
ing, and smelling—are precluded from
action; but by the sensibility of the spines,
he seems fully acquainted with every dan-
ger that may threaten him, and upon any
attempt to uncoil himself, if these spines
be touched, he immediately retracts, as-
suming his globular form again, awaiting
a more secure period for retreat."

Little was known of the habits of the
mole, until M. St. Hilaire, the eminent
French naturalist, brought to light some
interesting particulars concerning this little
animal: the manner in which she forms a
receptacle for her young is very curious:
in order to render the receptacle which
she and her young occupy, not liable to
be injured by the rain, she makes it al-
most even with the ground, and higher up
than the runs, which serve as channels to
carry off the water.

The place of her abode is chosen with
the greatest care, generally constructed at
the foot of a wall, or near a hedge or tree,
where it has no chance of being broken
in. The nest for the young is composed
of blades of wheat, with which the mole
forms a sort of mattress. The power of
smelling in the mole is very acute, and
this sense in all probability directs her in
the search of food. Her search for prey
generally takes place in the morning and
evening, when the feathered creation are
usually feeding, and whose means of sub-
sistence must be greatly increased by this
little animal driving worms to the surface
of the earth.

The early vegetables which now flour-
ish are the numerous tribes of mosses, and
the lichens or liverworts. The mosses
put forth their singular and minute part
of frustification during the winter months,
and offer a most curious spectacle to the
botanist, at a time when all the rest of

nature is dead to him. Lichens cover the ditch banks, and other neglected spots, with a leather-like substance, which in some countries serve as food both to men and cattle. The rein-deer lichen is the greatest treasure of the poor Laplanders, who depend upon it for the support of their only species of domestic cattle, during their tedious winters.

On the twenty-second of December happens the winter solstice, or shortest day; when the sun is hardly ten hours above the horizon.

The farmer has little to do out of doors in the course of this month. His chief attention is bestowed upon the feeding and management of his cattle, and various matters of household economy.

The festival of Christmas occurs very seasonably, to cheer this comfortless period of the year. Great preparations are made for it in the country, and plenty of rustic dainties are provided for its celebration according to the rights of ancient hospitality. Thus the old year steals away scarcely marked and unlamented; and a new one begins, with lengthening days and brighter skies, inspiring fresh hopes and pleasing expectations:—

"Mysterious round! what skill, what force divine,
Deep-felt, in these appear; a simple train;
Yet so delightful, mixed with such kind art,
Such beauty and beneficence combined!
Shade, unperceived, so softening into shade;
And all so forming an harmonious whole,
That, as they still succeed, they ravish still!"

THOMSON.

THE CHETAH, OR HUNTING LEOPARD.



THE chetah is a native of India, where it is trained for the chase; and also of Africa. It is as large, or nearly so, as the leopard, but is superior in height, and to the length of its limbs, which are slender and tapering; its body also is less robust. The fur is more than moderately full, and of a yellowish fawn-color, beautifully covered with round black spots; and

a distinct stripe of this color passes from the inner angle of the eye to the mouth. A thin hog-like mane runs down the back of the neck. The forehead and outline of the profile are convex; the eye is very fine, large, and expressive.

The mode of coursing with the chetah is thus described: they are led out in chains with blinds over their eyes, and sometimes carried out in carts; and when antelopes or other deer are seen on a plain, should any of them be separated from the rest, the chetah's head is brought to face it, the blinds are removed, and the chain taken off. He immediately crouches and creeps along with his belly almost touching the ground, until he gets within a short distance of the deer, who, although seeing him approach, appears so fascinated, that he seldom attempts to run away. The chetah then makes a few surprising springs, and seizes him by the neck. If many deer are near each other, they often escape by flight; their number giving them confidence, and preventing their feeling the full force of that fascination which to a single deer produces a sort of panic, and appears to divest him of the power, or even inclination, to run away or make resistance. It is clear that they must always catch them by stealth, or in the manner we have described, for they are so swift even as common deer.

To this account we may add that, should the chetah miss his aim, he desists from further pursuit, and slinks back to his master, who replaces the hood, and reserves him for another chance. When he is successful, the ferocity of his nature at once displays itself, so that, to recover the prey, the keeper is obliged to be extremely cautious, enticing him with meat carried for that purpose.

The chetah (*felis jubata*) belongs to the typical genus (*felis*) of the "carnassiers" of Cuvier, though in one point it differs a slight departure of form from the group with which it is associated; we allude to the semi-retractile condition of the talons. When we examine the talons of the lion or tiger, we find them capable of being withdrawn into a sheath so that unless when brought into action they are completely hidden. This retractability results from the mechanism of the joint uniting the

this color passes from the eye to the mouth. It runs down the back of the forehead and outlines the eye; the eye is very expressive.

When coursing with the cheetah, they are led out in packs over their eyes, and when out in carts; and when deer are seen on a hill, they are separated from the pack. The cheetah's head is brought to the front, and the eyes are removed, and the cheetah immediately crouches with his belly almost to the ground, until he gets within reach of the deer, who, although he appears so fascinated, attempts to run away. He makes a few surprising leaps, and seizes him by the neck. If he fails, he retreats; and if he succeeds, he kills him. Their number gives them confidence, and prevents their feeling that fascination which produces a sort of panic, and robs him of the power, and makes him, to run away or make a leap. It is clear that they must kill by stealth, or in the manner described, for they are not common deer.

It may be added that, should the cheetah miss his aim, he desists from the chase, and slinks back to his lair. He places the hood, and recovers his chance. When he is overcome by the ferocity of his nature at himself, so that, to recover the chase, he is obliged to be extremely patient, he is obliged to be extremely patient, and to wait for him with meat carried

Felis jubata) belongs to the genus *Felis* of the "carnassiers." Although in one point it differs a little from the group to which it is associated; we allude to the condition of the talons. The talons of the lion or leopard are capable of being withdrawn, so that unless when the claws are completely retracted, the result is from the joint uniting the

The Cheetah, or Hunting Leopard.



last phalangeal bone to the one which precedes it, so that the former bone, which is partially encased in the talon or hooked nail, is allowed to pass by the inner side of its predecessor. The retraction is involuntarily effected by a lateral ligament, which acts as a sort of spring, and by the natural action of the extensor muscles of the fore-arm operating by means of tendons on the bones to which these formidable engines are attached. Now, in the cheetah, the talons are at best but partially retractile from the laxity of the ligaments, and, consequently, are more worn and blunted at the points than is the case in the lion, tiger, or panther; besides this, the paw is less rounded and cat-like, and, in fact, more approaching that of the dog in its general form than is to be found in any other of the genus. In anatomical conformation, however, as well as in disposition, the cheetah is strictly feline.

THE SCIENCE OF THE SCRIPTURES.



WHEN we consider that the sacred writings are specially devoted to the moral and spiritual concerns of mankind, we are not to look into them for scientific disquisitions, much less for the explanation of many of those deep mysteries—those ultimate causes, which seem beyond the grasp of the human intellect, and were evidently intended to be for ever hid from man in his sublunary condition. At the same time, considering the high authority of the scriptures, when they do casually allude to physical phenomena, we naturally expect that no statements at variance with physical science shall be given. Accordingly, we find that the language of scripture is extremely guarded—we might almost say most wonderfully precise in this particular; and moreover, where there may appear a discrepancy between its statements and the phenomena of nature, that discrepancy will be found to arise from the limited

observation or erroneous views of man, not from any misstatement or inaccuracy in the sacred record.

It has been said that the scriptures contain the germ of all true philosophy. Most certain it is that science has grown up and flourished almost exclusively among that favored portion of mankind to whom the sacred writings have been made known. These ennobling truths have expanded the mind, subdued the crude and roaming intellect, and directed the judgment to views both of physical and moral nature, which have been conducive in the highest degree to the progress of civilization.

Though the sacred writers on no occasion professedly treat of natural science, yet we find many allusions to the operations of nature scattered through their pages. Much of the beautiful imagery of scripture, too, is drawn from natural objects—the flowers of the field, the birds of the air, and the beasts of the forest, are all employed to illustrate and exalt the ways of Providence with man. What a treasure would be found could we recover at this day the lost treatises of Solomon on all these subjects!

Many illustrations might be given of the accuracy of scientific allusions found in scripture; we shall select a few.

Solomon says (*Ecclesiastes*, i. 7), "All the rivers run into the sea; yet the sea is not full: into the place from whence the rivers come, thither they return again." This is just the modern explanation of atmospheric evaporation. Clouds of moisture rise from the ocean, float about in the atmosphere, descend in rain, and, collecting into rivers, this moisture, after ministering to plants and animals, flows again into the sea. From the expression, "there ariseth a little cloud out of the sea" (*1 Kings*, xviii. 43), and various other similar allusions, it is perfectly evident that the sacred writers were familiar with atmospheric evaporation. Yet, at a comparatively modern period, it was a favorite theory of meteorologists, that the waters of the ocean made their way up from the sea through the porous sand and rocks; and thus filtered, lost their saline particles, and then issued as springs of fresh water from the mountain tops and sides. And this ex-

aneous views of man, statement or inaccuracy.

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(Ecclesiastes, i. 7), "All into the sea; yet the sea is the place from whence they return again." modern explanation of atmo- spheric moisture. Clouds of moisture float about in the at- tend in rain, and, collecting moisture, after ministering to animals, flows again into the expression, "there ariseth out of the sea" (1 Kings, various other similar allu- tions perfectly evident that the sa- vere familiar with atmospher- . Yet, at a comparatively , it was a favorite theory of , that the waters of the ocean y up from the sea through and rocks; and thus fil- ir saline particles, and then ngs of fresh water from the s and sides. And this ex-

planation was made to harmonize with the words of Solomon just quoted. Nothing could be more incorrect than this explanation, both in a chymical and mechanical acceptance. Unchymical, because no filtration will deprive water of salts dissolved in it by a chymical solution—unmechanical, because no fluids, even supposing a capillary attraction, will rise in such quantities, or to such heights, contrary to the known laws of hydrostatics. When clearer views of the laws of evaporation revealed the falsity of this theory, the error was extended to Solomon also, although it is evident that his statement agrees both with the actual process of nature, as well as with the latest and more correct exposition of this process.

It is not a little remarkable to observe, that Moses, in his detail of the animal creation, follows exactly the modern zoological arrangement—that is, he begins with the formation of the simplest animals, and ascends in the scale according to the complexity of the higher structures. Now, it is evident that Moses did not in this instance adopt any cotemporary system of zoology, because the system of the Egyptian priests, as far as we learn from Pythagoras and Aristotle, who gleaned part of their information from them, was by no means so scientific. From Aristotle downward, a very incomplete arrangement of the animal kingdom prevailed; and, in fact, it was not till the time of Cuvier, in the beginning of the present century, that anything like a correct arrangement of animal beings was accomplished. After long and laborious researches made by this great naturalist and his coadjutors into the minute structure and comparative anatomy of animals, a system was framed, beginning with the simplest and lowest forms of creeping things, and ascending by a progressive scale to the most perfect animals.

Now, supposing an uninspired and unscientific person in the time of Moses to have set about constructing an account of the creation, it is most likely that he would have commenced with man and the higher animals, and gone on in the ascending scale—a system which was, indeed, followed by all the writers on animals previous to the discoveries of Cuvier.

The spontaneous production of animals from the earth or soil without a parent, and the equivocal production of new species from the bodies of other larger animals, were also dreams of the philosophers of former days, and are indeed to some extent prevalent in the present time. Yet the distinct succession of species from parent species, is an express statement of the scriptural narrative—"Let every plant and every animal bring forth seed after its kind." The minute observations of the microscope have, by prodigiously enlarging the field of vision, shown that the habits of even the smallest animal are perfectly in accordance with this scriptural statement.

The distinction between matter and spirit is repeatedly alluded to in the sacred writings. The organization of the human body and its subsequent endowment with life is also unequivocally stated. "The Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life, and man became a living soul." Theories of materialism have in all ages been prevalent in opposition to this view; yet the phenomena of life can never be satisfactorily explained on the supposition that it is the result of matter alone. The physiologist must assume a vital force, or power, or principle; the moralist a thinking principle or mind.

We can not look at the intelligent eye—we can not contemplate the motions and actions of even the simplest animal—without being conscious that there is something here more than in the rocks and stones, and the inert and lifeless matter around us. "Who knoweth the spirit of man that goeth upward, and the spirit of the beast that goeth downward to the earth?" (Ecclesiastes iii. 21.) "Or ever the silver cord be loosed, or the golden bowl be broken, or the pitcher be broken at the fountain, or the wheel broken at the cistern: then shall the dust return to the earth as it was; and the spirit shall return unto God who gave it." (Ecclesiastes xii. 6, 7.)

When a seed of any plant, as wheat or barley, is put into the ground and subjected to the action of heat, moisture, and air, the seed lobe or cotyledon immediately begins to assume a new action. The

starchy matter of which the great bulk of it is composed undergoes a chymical change, and is speedily converted into a half-liquid sugar; in this state it affords nourishment to the young and minute germ in the centre, until this germ pushes out roots into the surrounding soil. In this respect the seed may be said to die, as its greater part passes from the organized state under which it had hitherto resisted decay, to the condition of inorganic or dead matter. Any one may satisfy himself of this by pulling up a plant of wheat or barley when it is about an inch above ground; the slough of the seed will then be found attached with its centre collapsed, and in a state of rottenness. Hence St. Paul's comparison of the resurrection of the body to the germination of a seed is, in all that is necessary for such analogies, scientifically correct: "That which thou sowest is not quickened except it die" (1 Corinthians xv. 36.) We have the same comparison made by Christ himself: "Verily, I say unto you, except a corn of wheat fall into the ground and die, it abideth alone; but if it die, it bringeth forth much fruit." (John xii. 24.)

By some flimsy and superficial cavillers, these have been instanced as cases of the little dependence to be placed in the scientific accuracy of the Scriptures. Yet the speakers on these occasions were alluding to a fact which was within the sphere of the least observant of their hearers; for if they examined a young plant, "it may chance of wheat or of some other grain," they could not fail to see attached to the green budding germ the remnants of the seed in a state of rottenness and decay.

The sacred writers frequently illustrate their precepts by allusions to the scenery and operations of nature. None are more frequent than references to the revolving seasons. "Spring time and harvest," breathe of cheering hope and of promises fulfilled. In Palestine, and indeed in all the warmer regions of the globe, the seasons differ somewhat in their sequences from what takes place in this country. Along the whole southern shores of the Mediterranean, and in the most fertile parts of Asia, including Palestine, in consequence of the early spring, the grain

crops, as well as other fruits of the earth, come early to maturity, so that harvest comes on and is finished before midsummer. Hence that scriptural simile, "the harvest is past, the summer is ended, and we are not saved," is strictly correct as to the sequence of the respective seasons, although it would appear an inaccurate allocation of terms as applied to our northern climates.

The scripture language is very guarded with respect to all physical allusions beyond the sphere of our earth. The heavenly bodies—the sun, moon, and stars—are casually alluded to as objects displaying the majesty of the Creator; but astronomy was a field too wide and too remote from the moral wants of man to be entered into. Any actual information regarding these bodies, would perhaps have proved of too distracting a nature for his present limited sphere to be of any use. We accordingly find, that when any allusion is made to them, it is simply as they are seen by us. Hence the sun is said to rise and set, just in such language as is used at the present day by the vulgar, as well as by the best informed astronomers. And hence the famed persecution of Galileo arose from the bigotry of the age, and the supremacy of the religion to which he belonged; not to anything in Scripture in the slightest degree opposed to astronomical science.

This very reserve of the Scriptures on all delicate points is an internal evidence, among many others, of their authenticity and high authority. They are as remarkable for what they withhold as for what they impart. What mere mortal, in writing even on the most sacred subjects, is not fond of a somewhat over display of knowledge? Perhaps this accurate and guarded language of scripture in all that respects secular science, can not be more forcibly brought out than by contrasting it with the writings of uninspired theologians. We need only allude here to the books called Apocryphal for examples of what we mean; and if we turn to the pages of the early fathers who wrote after the introduction of Christianity, we shall find that whenever these uninspired men touch upon science, it is but the science of their own day, and consequently full of all sorts of errors and crudities.

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After these examples of scriptural accuracy, we ought surely to hesitate ere we give way to skeptical doubts on any adverse propositions. Such is the imperfection of human science, that every new step we make in it is but the correction of an old error. We build up fabrics of speculation to-day, which the facts of to-morrow level with the dust; whereas, the dicta of scripture are the results of infinite wisdom, and are founded on the adamantine rock of ages.

Far be it from us, however, to seem to damp the energies of scientific pursuit, or to cast the slightest shade on the beauty and utility of true science. The more perfect that it becomes, the nearer will it resemble that Divine Wisdom which at first framed and continually upholds the material universe.

FREEDOM OF THE MIND.

WHEN the mind once tries its strength, it can no longer be restrained. The attempts to keep it down have served only to render it, in most cases, from its native elasticity, the more impatient of these restrictions. The civil arm has often been exerted to establish the supremacy of some one sect, which, in the struggles and revolutions of society, has happened to be uppermost. It has put forth the power of the laws. It has tested the efficacy of pecuniary penalties. It has seen what imprisonment and torture would do. It has kindled the flames of persecution; and has tried the effect of fire upon the flesh, by way of correcting the irregularities of the mind. Every method which human ingenuity or refined cruelty could devise, has been attempted to restrain the inquiry of men; or rather to bring them to a conformity to the predominant standard of religious doctrine.

But it has all been in vain. With the attempt to produce uniformity or conformity of faith or worship, dissent and diversity of opinion have increased. Sometimes such attempts have partially succeeded for a time, but the reaction in the end has always been proportioned to such

success. The human mind naturally resists compulsion.

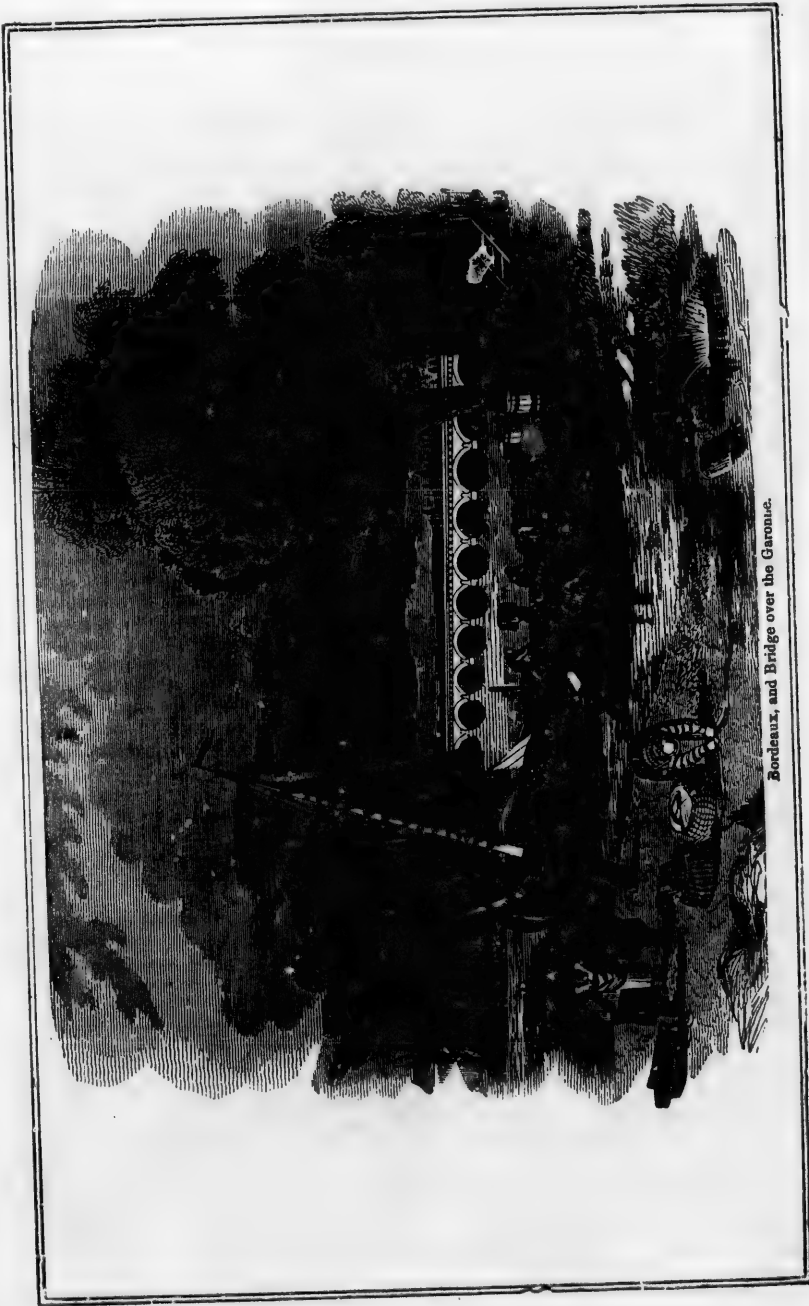
Men in general prefer to go wrong of their own accord, rather than be compelled to go any way at the will of another, who they know has no rightful authority over them. When you attempt to force men to believe a doctrine or rite, which does not approve itself to their own judgment or knowledge, you immediately invite them to inquire into the authority of the one, or the reasonableness of the other; and inquiry under such circumstances commonly leads to doubt, and doubt often leads to dissent. If encroachment and intolerance have led to dissent, these in their turn have often prompted to further encroachments and multiplied restraints on the freedom of inquiry.

But all would not do. The thoughts of men will be free. You can place no restrictions on their inquiries, which the mind will not sooner or later break through or transcend. As it is said of an eminent artisan, that as yet he has found no vessel strong enough to contain the powerful steam which his ingenuity has taught him the means of generating, still more may it be said of the action of the human mind, that it possesses in itself an expansive force, which, when excited, will surmount every artificial barrier.

BORDEAUX.



BORDEAUX is one of the largest and most beautiful cities of France. Many of the streets, squares, quays, public buildings, and private houses, of Bordeaux, are remarkably fine, and even magnificent, while they derive additional splendor from the striking view which they present from the river. The stone bridge over the Garonne is one of the finest works of the kind on the continent, and is 531 yards in length, or one third longer than London bridge. It has seventeen arches, the seven central arches



Bordeaux, and Bridge over the Garonne.

having each a span of eighty-seven feet; the breadth between the parapets is fifty feet, and the roadway is nearly level. The difficulties attending the creation of this bridge was very great, owing to the depth of the river, which in one part is twenty-six feet at low-water, with a rising tide of from twelve to eighteen feet, and a current which often flows with the velocity of seven miles an hour; and, to add to these obstacles, there is a shifting and sandy bottom. The bridge was begun in 1811, and finished in 1824.

Several of the finest streets are lined with trees, and form a fine promenade. Thus the Cours d'Albret is nearly half a mile long, and the Cours du Tourny and du Jardin Public form together a line three quarters of a mile in length. The principal square is the Place Louis Philippe Premier, formerly Place Louis Seize, each side of which is a quarter of a mile long. At one end it is open to the river; on the other it is crossed by the Cours Douze Mars, beyond which the place is enclosed by a range of houses in the form of a crescent. On the sides plots of considerable size are planted with trees, forming the Allées Angoulême and de Berri. There are several other fine squares or "places," and a public garden. The exchange and the customhouse, both fine edifices, form two sides of the Place Royale. The quays stretch to a great length along the river, and have an appearance at once interesting and imposing. The public bonding-warehouses for colonial and other merchandise and produce are remarkable for their extent and beauty. The principal theatre for size and magnificence is scarcely exceeded by any in Europe. Neither the cathedral nor the Hôtel de Ville are marked by any very striking features. Bordeaux possesses all the public establishments of a city of the first class.

There are a mint, an observatory, an académie universitaire, a collège royal, schools of architecture, hydrography and navigation, botany and natural history, drawing and painting, medicine and surgery; several learned societies, a public library, museum of antiquities, and a gallery of paintings.

Bordeaux is the chief outlet of the south-

western and even of the southern and mid-land parts of France. Its situation on the Garonne, not far from the estuary of the Gironde, which receives the waters both of the Garonne and the Dordogne, gives to Bordeaux the advantage of nearly one thousand miles of river navigation. The Canal du Midi, 154 miles long, connects the Garonne with the Mediterranean. Bordeaux has always been celebrated for its wines, which forms the staple article of commerce.

BARGAIN-HUNTERS.



HERE is a large class of persons who are so inveterately prone to bargain-hunting, that they seldom or never purchase anything of an abate-

able nature which they do not cheapen as much as possible. This habit is not so much attributable to any lack of means in the buyers, as to a childish love of obtaining a maximum quantity at a minimum value, which affords them the additional gratification of boasting afterward of their bargains, and complimenting themselves on their own shrewdness. With such persons the purchase of sixpennyworth of oranges is as eagerly seized to gratify their favorite propensity as the order for a set of plate; and we have known instances of individuals, possessed of ample pecuniary resources, so confirmed in this habit, as to wander in anxious uncertainty from stall to stall before they could decide the momentous question as to which was the most eligible pennyworth of apples.

This habit of bargain-hunting, while we laugh at it for its folly, deserves to be denounced for its mischief. It holds out a premium to unfair trading, to trickery and lying: it is a cruel oppression of him who buys upon him who sells, and powerfully assists in lowering the hard-earned wages of the poor mechanic. The manufacturer is compelled, in order to gratify the morbid love of cheapness, to produce

goods of the most trashy and useless description, and to reduce the wages of those whom he employs to the lowest fraction. The shopkeeper, in order to secure this description of customers, is forced to adulterate his articles; to profess them to be what he knows they are not; to exert himself, by short weight, lying puffs, inferior substitutions, and a thousand unworthy artifices, to keep on a fair equality with his neighbors. No sooner does a new shop open, the owner of which professes to sell cheaper than usual, than he is patronised by the bargain-hunters, to the great injury and often ruin of his more conscientious competitors. Whether he himself ever intend to pay for his stock is not inquired into; whether he intend to pursue an honest and honorable course is held to be no business of the customers: he sells cheapest, and this supersedes every other consideration. The consequence too often is, that the bargain-offering tradesman, after having injured many a respectable shopkeeper around him, suddenly decamps at the expiration of a few months, and the secret of his bargains is at length apparent; namely, that never having intended to pay for the goods himself, any receipt must be a clear gain to him, and he could thus afford to sell at prices which must be ruinous to the upright dealer.

This cheapening mania exercises also a most pernicious influence in producing distrust, duplicity, and unmanly feeling, between seller and buyer. The seller, sharpened by past experience, is in self-defence compelled, in order to obtain a remunerating profit, to ask more than the real value of the article, in order to leave room for the abatement which he expects as a matter of course to follow. The offer by the buyer of less than is asked is really an insult, for it virtually implies that the seller is either a fool or a rogue—a fool to take so little, or a rogue to ask so much; and thus the straight-forward honesty and integrity which should characterize dealings in the market or the shop, as much as anywhere else, is set aside, and seller and buyer meet together with a feeling that confidence and honor are out of place there, and that cunning and overreaching are among the recognised

moralties of trade. The seller, while he introduces the article to his customer, feels a conviction that unless he adds an untruth to the specification of the price, unless an assertion is made or a warranty given which it would be absurd to believe, the article will be rejected, and the hesitating customer will not purchase it, but patronise some other less scrupulous tradesman. The bargain-hunter, on his side, turns the article over in a contemptuous manner, exerts his ingenuity to find some fault in it which shall afford a pretext for a lower offer, and having found a real or an imaginary one, bids something below what he often must know is its real value. The poor tradesman wants ready money, the article really cost him more, he knows of other shops where it may be had at that price, and, with a sickening heart and an inward condemnation of the selfishness of man, he accepts the offer, and the purchaser departs with his bargain. But, strange metamorphosis, the article so recently pronounced almost worthless, the purchaser now boasts of as excellent, worth double the money, and delights to hear his friends innocently express their surprise how it could possibly have been made for the price. Such a mode of dealing is unmanly, ungenerous, and unjust, and requires but to be candidly considered to be denounced by all who think and feel rightly.

The influence of this pernicious system upon the laboring part of the community is cruel and disastrous. We see every few days deplorable accounts of women who are compelled to sew for the merest pittance, and the shopkeepers are denounced for their cruelty. But the blame, we are persuaded, lies less with the immediate than the remote employers. The public, which vents its anger on the shopkeeper, is the real transgressor; for the dealer merely obeys the popular demand. Pressed upon by the insane cry for low-priced articles, as well as by a general competition, the manufacturer and shopkeeper, if they would do business at all, must reduce their expenses to the lowest point in order to obtain any profit, and to this end are compelled to wring from their workpeople the utmost amount of work for the least possible remuneration. Un-

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reasonably protracted hours are resorted to, toil is not allowed to cease with the day, the labor of the woman is introduced to supersede that of the man, and that of the child to supersede both, education is necessarily neglected, deformity produced, stimulants resorted to, vicious habits formed, and squalor and disease are induced; and all this too often that the purchaser may procure an article at a fractional abatement. The occasional subscription and the cold donation of charity are but a poor reparation for depriving the workman of his honest earnings, and the manly independence of pocket and of character which it is so desirable he should possess. It is true that the payment of fair prices by the buyer will not always secure fair remuneration to the operative, but the habit of cheapening must have a tendency to lower wages and inflict misery on the producers.

The pernicious practice of bargain-hunting is by no means confined to the rougher sex. It is to be lamented that the practice is far too common among that sex whose kindness of heart and sensibility need no eulogy, and whose propensity in this respect we can attribute to no other source than thoughtlessness. It is perhaps also partly to be accounted for by the fact, that females generally have less money at command than men, and therefore when they spend it are perhaps somewhat more unreasonable in their exchanging expectations. A little thought as to the amount of misery to others which must result from the gratification of this propensity, would surely be sufficient to convince them of its unreasonableness and inhumanity. Little do ladies think, while they are cheapening the thread and the tape, or the shawls, or the linens, they purchase, how much poverty and misery they are assisting to entail on the sickly operative who makes them, and how much of the ignorance and destitution and vice, the bare mention of which shocks their sensibilities, is traceable to this baneful practice.

The habit we have denounced is also very fallacious in a pecuniary point of view. The most shrewd and practised cheapener is often deceived, and finds, after he has secured the bargain, that, to

use the common phrase, "it is too cheap to be good," or that he did not really want it, and therefore it was dear at any price. He discovers too late that what he has bought was made to be looked at rather than used, to deceive rather than satisfy, and that the little he gave for it was far too much for such an article, as it was really worth nothing. The cheapest things may be very dear, and the dearest very cheap, and good articles can not reasonably be expected at any other than fair prices. Independently therefore of the injury which the habit of cheapening inflicts upon the workman, it is deceptive and unprofitable even to the purchaser. The prices of shopkeepers are certainly not always to be paid without demur, for this would be to hold out a premium to imposition and extortion, but there should be considerateness on the part of the purchaser as to what ought to be the fair price of such an article. To deal as much as possible with tradesmen who are known for their integrity and uprightness, without being seduced by every unprincipled adventurer who professes to be "selling off under prime cost," and closing business at a "tremendous sacrifice," will be found in the long-run not only the truest economy, and the most satisfactory to the purchaser, but also the most advantageous to the wellbeing of society and the general interests of honesty and honor.

A HABIT OF OBSERVATION.

THE means of exciting thought and reflection are not confined to books. Nor is intellectual progress confined to the study of books. The whole world, both of nature and of man, is full of instruction, and if studied, it will not only fill the mind with knowledge, but will afford that intellectual exercise which will promote intellectual development. If then you have formed the habit of observation, you will never be at a loss for employment for your thoughts. Every person you meet will, in the peculiarity of character presented, afford food for thought; every event of providence, and every object of nature, will thus be the means of intellectual development. But what is the habit

of observation? It is not merely the looking at things, but the habit of thinking and reflecting upon what you see. The man of observation is not the man who has actually seen the greatest number and greatest variety of objects; he is the man who has reflected the most carefully upon what he has seen, and in this way, derived the most valuable instruction from them. What we would have you seek is the habit of inquiry, and thought, and reflection, in regard to every object that may be presented to your notice, seeking the peculiarities, inquiring the causes, learning the effects, and tracing the relations and connexions of one circumstance, event, or object, with another. In this way you will be constantly making improvement—your intellectual powers will be constantly acquiring new strength and greater freedom and more full development. Form, then, the habit of close, accurate observation, and you will be possessed of a powerful instrument for intellectual improvement.

Nay more, this habit will have a further and more extensive influence. If you can employ your mind in thinking about the objects you have seen, you can also, under the influence of the same habit, employ it in thinking about the lectures and discourses which you have heard. And who is it that derives the greatest profit from what he hears? Not the one who hears the most or listens with the deepest interest at the time. But he who thinks most carefully of what he has heard after he has done hearing. And here is the point where many fail, and the reason that they do not derive so much improvement as they might otherwise from the lectures and discourses which they hear. They hear with interest and with pleasure, but when they have done hearing, they turn their thoughts to other things. What they have heard is soon gone from their minds, and no distinct and lasting impression is left. But if they would think over what they have heard, or talk it over with their companions, or write out an abstract, they would make it more entirely their own, which they now let slip, and they would acquire by the means great intellectual strength and development.

MARSEILLES.



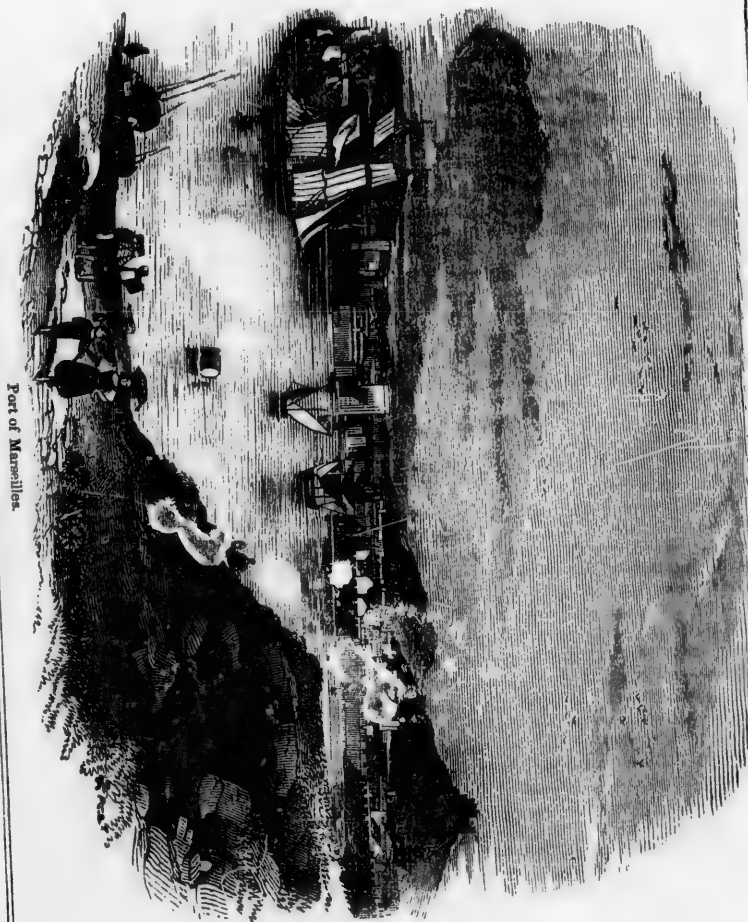
MARSEILLES, the great seaport of France on the Mediterranean, was founded six centuries before the Christian era, by the people of Phoea, a Greek colony of Asia Minor. It soon flourished, and its inhabitants formed minor settlements on the coasts of Gaul, Spain, and Italy. From its earliest infancy Marseilles has been an important place of maritime commerce. The soil in its neighborhood is sterile, and does not bountifully repay the labors of the cultivator. This circumstance, and the advantageous position of Marseilles, naturally diverted the energies of its population to trade. At the present time a fifth of the customs' duties collected in France, or nearly \$5,000,000, is contributed by Marseilles; and its commerce is increasing, the occupation of Algiers by the French having brought the trade with that part of Africa into the hands of the Marseillaise. There are many soap manufactories and tan-yards at Marseilles. The refining of sugar is an important branch of industry. The trade in perfumery and olive-oil is also considerable. The exports of Marseilles consist of colonial produce, brandy, wine, liqueurs, syrups, preserved fruits, capers, anchovies, oil, soap, verdigris, perfumery, madder; manufactured goods, consisting of light woollens, silks, shawls, ribands, gloves, hardware, &c.; and the chief articles of import are sugar, coffee, cotton, indigo, pepper, iron, dye-woods, hides; and, when the trade in grain is active, wheat from the Black sea, Sicily, Italy, and Africa. The harbor is in the heart of the city, capacious and sheltered, but it does not admit vessels of the larger class; and as the accumulation of refuse from the shipping is not carried away by tides (the Mediterranean tides being scarcely perceptible) the port is frequently offensive. The form of the harbor resembles an elongated horse-shoe: the entrance is defended by forts

ARSEILLES.

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This circumstance, and the position of Marseilles, have developed the energies of its population.

At the present time a large sum of the customs' duties collected in the port of Marseilles, nearly \$5,000,000, is contributed to the French treasury. The occupation of Algiers by the French has brought the trade with that country into the hands of the French. There are many soap manufactories at Marseilles. The wine trade is an important branch. The trade in perfumery and in the products of the East is also considerable. The exports consist of colonial products, such as wine, brandy, liqueurs, syrups, prepears, anchovies, oil, soap, gum, madder; manufactures consisting of light woollens, ribbons, gloves, hardware, and other articles of import are cotton, indigo, pepper, iron, and other articles; and, when the trade is active, wheat from the Black Sea, and Africa. The harbor of the city, capacious and deep, but it does not admit vessels of the largest class; and as the accumulation of ships from the shipping is not aided by tides (the Mediterranean scarcely perceptible) the port is often offensive. The form of the harbor is an elongated horseshoe, and its entrance is defended by forts.



Port of Marseilles.

placed opposite each other. The lazaretto occupies an area of above 278,000 square yards, and is considered the finest establishment of the kind in Europe: the quarantine regulations are severe, but a general revision of these laws for the countries on the Mediterranean is likely to take place.

CONCISE HISTORY OF THE ENGLISH BIBLE.



THE history of the English Bible comprehends a period of nine hundred years. The venerable Bede translated the Psalter and the gospel into the Anglo-Saxon, by order of King Alfred. The price of a Bible in 1274, fairly written, with a commentary, was from \$150 to \$250, though in 1840, two arches of the London bridge were built for \$123.

Richard Rolles was one of the first to attempt a translation of the Bible into the English language, as it was spoken after the conquest. He wrote a paraphrase in verse on the book of Job, and a gloss upon the psalter, but the whole Bible, by Wicliffe, appeared between 1360 and 1380.

A bill, in the year 1490, was brought into the house of lords, to forbid the use of English Bibles; but it did not pass. A decree of Arundel, archbishop of Canterbury, in 1403, forbade unauthorized persons to translate any text of Holy Scripture into English, as well as prohibited the reading of any translation till approved of by the bishops, or a council. Several persons were burned for reading the word of God.

In the reign of Henry the Fifth, a law was passed, that "whoever should read the Scriptures in their mother-tongue, should forfeit land, cattle, body, life, and goods, from their heirs for ever, and be condemned for heretics to God, enemies to the crown, and most arrant traitors to the land." And between 1461 and 1493, Faust, or Faustus, who undertook the sale of Bibles at Paris, where printing

was then unknown, narrowly escaped punishment. He was taken for a magician, because he produced them so rapidly, and because one copy was so much like another.

The Latin Vulgate, printed at Mayntz, in 1462, was the very first printed edition of the whole Bible in any language, bearing the date and place of its execution, and the name of the printer. The first printed edition of the Holy Scriptures in any modern language, was in German, in the year 1467. The New Testament by Luther, revised by Melancthon, appeared in 1521. William Tyndal, in 1526, printed his English Testament at Antwerp; but those who sold it in England, were condemned by Sir Thomas Moore, the lord chancellor, to ride with their faces to the horses' tails, with papers on their heads, and to throw their books and themselves into the fire at Cheapside. Tyndal himself was strangled and burned. His dying prayer was, "Lord, open the king of England's eyes." John Fry, or Fryth, and William Roye, who assisted Tyndal in his Bible, were both burned for heresy.

Cranmer obtained a commission from the king to prepare, with the assistance of learned men, a translation of the Bible. It was to be printed at Paris; but the inquisition interfered, and 2,500 copies were seized, and condemned to the flames. Some of these, however, being, through avarice, sold for waste paper, by the officer who superintended the burning, were recovered, and brought to England, to the great delight of Cranmer, who, on receiving some copies, said that it gave him more joy than if he had received two thousand pounds. It was commanded that a Bible should be deposited in every parish church, to be read by all who pleased, and permission at last was obtained to all subjects to purchase the English Bible for themselves and families.

In the year 1535, Coverdale's folio Bible was published. In the reign of Edward the Sixth, new editions appeared. In Mary's reign, the gospels, or reformers, fled abroad, but a new translation of the New Testament, in English, appeared at Geneva, in 1587, the first which had the distinction of verses, with figures attached to them.

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DUTIES TO SOCIETY AND OURSELVES.

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A quarto edition of the whole Bible was printed at Geneva, 1560, by Rowland Harte. A New Testament in Welsh, appeared in 1569; the whole Bible in 1588, and the English translation, called the Bishop's Bible, by Alexander Barker, in 1568. It was 1582 that the Roman Catholic Rhemish Testament appeared, and in 1609 and 1610, that their Doway Old Testament was printed. In 1607, was began, and in 1611 was completed, a new and more correct translation, being the present authorized version of the Holy Scriptures, by forty-seven learned persons (fifty-four were appointed), chosen from the two universities. This edition has been truly styled, "not only the glory of the rich, and the inheritance of the poor," but the guide of the wayworn pilgrim, the messenger of grace, and the means of knowledge, holiness, and joy to millions.

DUTIES TO SOCIETY AND OURSELVES.



HE truly polite must be a habitually cheerful person. But cheerfulness, it will be said, is a matter of temperament and of circumstance. Then if we possess it not, we should cultivate it as a duty.

There is no word in our language more commonly used, nor any one less defined or less understood than "happiness." It is sometimes taken to mean pleasurable sensations derived through the senses; sometimes it means a peculiar state of mind. Perhaps it is easier to tell what happiness is not, than what it is. The most perfect health is not happiness unless one has something to do. Health and riches do not make one happy. These accidents of being rather excite cravings for enjoyment. They are means, not ends. A rich man can ride but one horse, or sit but in one coach, or eat but one dinner, or wear but one suit of garments, or live but in one house at a time. Persons in moderate circumstances can do the same.

Health, riches, power, and distinction, do not make happiness. Distinction is troublesome: it has more pains than pleasures: it is jealous, envious, and distrustful. Power does not make one happy; it demands the most busy watchfulness to keep it. If lost, its absence is often followed by painful suffering, and the possession of it is always accompanied by the fear of losing it. Riches are sometimes regarded as means of enabling one to live in elegant luxury, and even in voluptuous enjoyment. This is no way to be happy; the appetites soon become satiated; the stomach wears out; the senses are palled; diseases come; the body may be racked on a velvet couch as well as on a straw bed.

Is there, then, any such thing as happiness? There must be such a thing, or the laws of nature, which provide for physical, intellectual, and moral being, are false and deceitful, and the gift of revelation is a fable.

If there be such a thing as happiness, it will be found in that knowledge of and obedience to the laws of nature which make health, physical and spiritual. It will be found in obeying the propensity to action, a some continuous, useful end; that is, in pursuing reasonably some one of the many vocations in society which tend to secure one's self respect and peace of mind, and which lead also to the common good.

But there may be disappointments, ill luck, and causes of mortification and sorrow. These, we apprehend, do not seriously disturb any well-regulated mind when there is a consciousness that no reasonable foresight or prudence would have discovered and prevented the cause.

Perfect happiness in this world, it must ever be remembered, is not to be expected: the only happiness that we can really attain consists in a certain contented tranquillity of mind under all the shocks and changes of this mortal life. There is a point called the *happy medium*; and this should be an aim in all human arrangements. Be moderate in all things.

For example, to take no amusement is bad, for it deprives the mind of needful rest and recreation; so likewise it is bad to be altogether given up to amusement,

for then all serious objects are lost sight of. The true plan is to take amusement in moderation.

Some minds have never awakened to a taste for poetry, fiction, the imitative arts, and music, and they thus lose much pleasure, which others enjoy; again, there are some in whom nature has implanted and use cultivated so strong a predilection for these things, that it becomes a vice.

To be too much in society, is sure to deteriorate the human character, making it frivolous, and incapacitating it for taking abstract and elevated views: on the other hand a perfectly solitary life weakens the mind, lays it open to odd fancies and eccentricities, if not to hypochondria, and ends in some instances by altogether throwing it from its balance. The medium is here also found salutary.

To be extravagantly gay, in a world where so many evils lurk around our every step, and so many onerous things claim our attention, is wrong; so is it to be always serious, seeing that the world also contains the materials of much happiness. What is proper is, that we should be uniformly cheerful without letting our cheerfulness run into frivolity, or, if we have cause to grieve, that we should grieve in moderation, believing that a benignant Providence will make all right in the end.

THE NATIONAL GALLERY OF ENGLAND.



THE British National Gallery, like the museum, arose out of the collection of a private individual. The only difference is, that Sir Hans Sloane directed his museum to be offered, after his death, to the nation on payment of a specified sum; but Mr. Angerstein merely ordered his pictures to be sold for the benefit of his heirs, not contemplating, perhaps, that they might form the nucleus of a national collection.

John Julius Angerstein was born at St. Petersburg, in 1735, and came to Eng-

land when he was about fourteen years of age, under the care and patronage of an eminent English Russian merchant, Andrew Thompson Esq. He rose ultimately to be one of the most conspicuous merchants of London. In his character he united prompt and active business habits to an urbane and a cheerful disposition, having the ability to acquire wealth, and a heart to use it in gratifying his taste, by collecting rare and valuable pictures, he was greatly aided by the advice of the late Sir Thomas Lawrence, with whom he was intimate. Mr. Angerstein died on the 22d of January, 1822; and in the following year his gallery of pictures was bought by government for the sum of 57,000*l*.

There appears to have been a common opinion entertained that the gallery about to be formed was to be placed in connexion with the British Museum. Apparently acting on this supposition, in the year 1823, the late Sir George Beaumont presented to the trustees of the museum a collection of pictures; and another collection of ancient pictures came into their hands in 1831, in pursuance of the will of the Rev. Holwell Carr, who directed that they should be placed in the same building with those of Mr. Angerstein and Sir George Beaumont. As the National Gallery has been made a separate institution from that of the British Museum, it so happens that the pictures are thus vested in two different sets of trustees, on behalf of the public.

The pictures forming the National Gallery had been kept in Pall Mall: but different proposals were made at various times for the purpose of obtaining an eligible building to receive them. At last, when the King's Mews at Charing Cross was about to be pulled down, and the site built upon for shops, Mr. Wilkins suggested the propriety of appropriating the space for a national gallery, if one was intended to be built. The idea was approved; and in 1832 parliament voted 50,000*l*. for the erection, and in 1835, 12,000*l*. more. Mr. Wilkins was appointed architect, and the building was rapidly completed.

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View of the National Gallery in London.



centre of Trafalgar Square. But we are not aware that anything has yet been decided upon with respect to it.

The number of pictures at present in the Gallery is over two hundred. Such a collection, it is obvious, can only be but the commencement of a national gallery. Though the collection be small and confined, it contains some pictures of the very highest order; and, as a whole, it is a superior one, and quite worthy of forming a *beginning* to a collection intended for a nation such as Great Britain.

Of the more remarkable of the pictures may be mentioned, the "Raising of Lazarus," by Sebastian del Piombo, painted by him in 1518-'19, in competition with Raffaele, then employed on his picture of the "Transfiguration." This very remarkable picture is declared to be the second in the world. For the purchase of the two large Correggios, in 1834, parliament granted the sum of 11,550*l*. The first of these pictures is the original "Eccs Homo" of Correggio. The subject may be understood by the title—"Eccs Homo"—"Behold the Man!" (John xix. 5.) It is difficult to say anything about this wonderful production of art, so as to convey a right idea of it to those who have not seen it. The other picture is also an admirable one; the subject is—"Mercury teaching Cupid to read."

It is unnecessary, at present, to specify other pictures in the Gallery by Rembrandt, Rubens, Claude, &c. Of remarkable productions by English painters, there are Sir Joshua Reynolds's picture of Lord Heathfield, with the keys of the fortress of Gibraltar; Gainsborough's "Market Cart;" Wilson's "Land-storm, with the story of Niobe;" and the well-known productions of the two Anglo-Americans, Benjamin West and Copley, the father of the present Lord Lyndhurst, namely, "Christ healing the Sick," and the "Death of the Earl of Chatham." To these may be added the series of "Marriage à la Mode," and Wilkie's "Blind Fiddler." There is rather a pleasing circumstance to be mentioned, connected with the gift of this last picture to the National Gallery. Sir George Beaumont, presented, in 1823, to the trustees of the British Museum a collection of pictures,

but requested permission, in 1826, to withdraw two, which he deemed unworthy of being placed in a national gallery, and to substitute two others for them, one of them being this picture of Wilkie's.

The National Gallery is open the first four days of the week to the public, and the other two to artists.

ANIMAL HUMANITY.



It is extremely curious to observe in animals ways and doings like those of human beings. It is a department of natural history which has never been honored with any systematic study; perhaps it is thought too trifling for grave philosophers. We must confess, however, that there is some value in the inquiry, as tending to give us sympathies with the lower animals, and to dispose us to treat them more kindly than we generally do.

The sports of animals are peculiarly affecting. It is reported by all who have the charge of flocks, that the lambs resemble children very much in their sports. In the mellowed glory of a July evening, while the ewes are quietly resting in preparation for their night's sleep, the lambs get together at a little distance, perhaps in the neighborhood of a broomy knoll, and there begin a set of pranksome frolics of their own, dancing fantastically about, or butting, as in jest, against each other. The whole affair is a regular game at romps, such as a merry group of human youngsters will occasionally be allowed to enjoy just before going to bed. It is highly amusing to witness it, and to trace the resemblance it bears as to human doings; which is carried sometimes so far, that a single mamma will be seen looking on close by, apparently rather happy at the idea of the young folks being so merry but anxious also that they should not behave too roughly; otherwise, she must certainly interfere.

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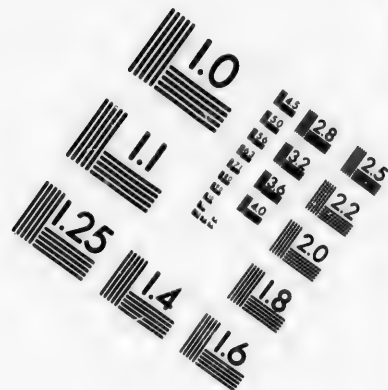
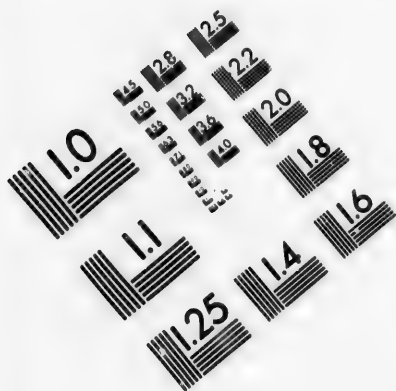
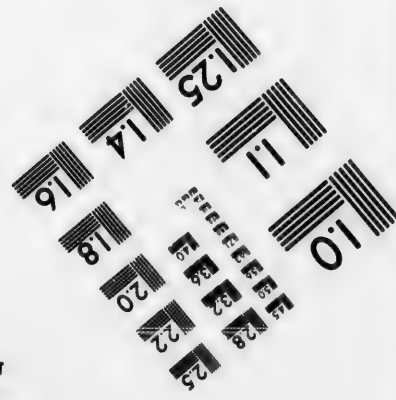
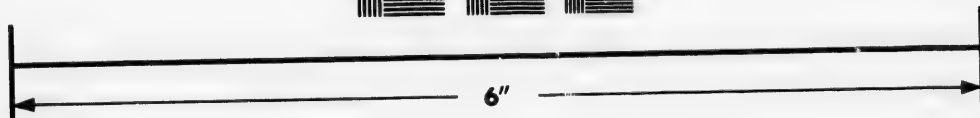
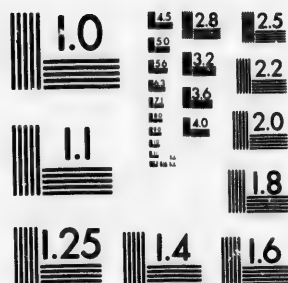


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Archipelago, where they abound, the matrons are often observed, in the cool of the evening, sitting in a circle round their little ones, which amuse themselves in various gambols. There is a regard, however, to discipline: and whenever any foolish babe behaves decidedly ill, the mamma will be seen to jump into the throng, seize the offender by the tail, and administer exactly that extreme kind of chastisement which has so long been in vogue among human parents and human teachers.

That there is merriment—genuine human-like merriment—in many of the lower animals, no one can doubt who has ever watched the gambols of the kid, the lamb, the kitten, or the dogs, which—

"Scour away in long excursion,
And worry other in diversion."

But there is something to be observed in these sports still more human-like than mere sport. The principle of *make-believe*, or just as opposed to earnest, can be discerned in many of their merry-makings.

The kindly social acts of animals, among themselves and toward mankind, is also an interesting subject of observation. A few months since some workmen, engaged in repairing the cathedral of Glasgow, observed an unusual concourse of sparrows coming regularly to a hole in one of the slanting walls, and there making a great ado, as if feeding some birds within. Curiosity being at length excited, the men proceeded to examine the place, and found that a mother-bird, after the flight of her brood, had got her leg entangled in some of the threads composing her nest, so that she was kept a prisoner. The leg was visibly swollen by the chafing produced by her efforts to escape. In this distressing situation the poor bird had been condoled with and fed by her fellows, exactly as a human being might have been in similar circumstances.

SCRAPS OF CURIOUS INFORMATION.

THE atmospheric pressure on the surface of the earth is near 15lbs. per square inch. The weight or pressure of water, is about seven ounces per square inch for every foot of its depth—845 cubic feet of

atmospheric air, are as heavy as one cubic foot of water. The bones of birds are hollow, and filled with air instead of marrow. The flea jumps 200 times its own length, equal to a quarter of a mile for a man. The Romans lay on couches at their dining tables on their left arms, eating with their right. The walls of Nineveh were 100 feet high, and thick enough for three chariots abreast. Babylon was 60 miles within the walls, which were 76 feet thick and 300 feet high. The earth is 7,916 miles in diameter, and 24,880 miles round. Forests of standing trees have been discovered in Yorkshire, England, and Ireland, imbedded in stone. A man is taller in the morning by half an inch than he is at night. The atoms composing a man are supposed to be changed every forty days, and the bones in a few months. Fossil remains on the Ohio proves that it was once covered by the sea. When the sea is of a blue color, it is deep water; when green, shallow. Book-keeping, by double entry and decimal arithmetic, was invented in 1501. Pocket watches were first introduced into England, from Germany, in 1501. The color of the mourning dress among the Chinese and Siamese, is white; with the Turks blue and violet; Ethiopians gray; Peruvians mouse-color; Japanese white; Persians brown, and Egyptians yellow. The human body can be brought to endure a heat of 280 degrees of Fahrenheit. The experiment has been tried successfully in this country. In the year 1510 a shower of stones fell at Padua, Italy. One of these stones weighed 120 pounds.

A box 24 inches by 16 inches square, and 22 inches deep, will contain a barrel, or 10,752 cubic inches.—A box 16 inches by 16 8-10 inches deep, will contain a bushel, or 2,150 4-10 inches.—A box 12 by 11 2-10 inches square and 8 inches deep, will contain a half a bushel, or 1,075 cubic inches.—A box 8 inches by 8 4-10 inches square and 8 inches deep, will contain 1 peck, or 237 8-10 cubic inches.—A box 8 by 8 inches square, and 4 2-10 inches deep, will contain one half peck or 268 8-10 cubic inches.—A box 4 inches by 4 inches square, and 4 2-10 inches deep, will contain one quart, or 67 2-10 cubic inches.

THE END OF FOUR GREAT MEN.

THE four great personages who occupy the most conspicuous places in the history of the world, were Alexander, Hannibal, Cæsar, and Bonaparte.

ALEXANDER, after having climbed the dizzy heights of his ambition, and with his temples bound with chaplets dipped in the blood of countless millions, looked down upon a conquered world, and wept that there was not another world for him to conquer, set a city on fire, and died in a scene of debauch.

HANNIBAL, after having, to the astonishment and consternation of Rome, passed the Alps, and having put to flight the armies of the mistress of the world, and stripped "three bushels of golden rings from the fingers of her slaughtered knights," and made her foundations quake, fled from his country, being hated by those who once exultingly united his name to that of their God, and called him Hani Baal, and died at last by poison administered with his own hand, unlamented and unwept, in a foreign land.

CÆSAR, after having conquered eight hundred cities, and dying his garment in the blood of one million of his foes, after having pursued to death the only rival he had on earth, was miserably assassinated by those he considered his nearest friends; and in that very place, the attainment of which had been his greatest ambition.

BONAPARTE, whose mandates kings and popes obeyed, after having filled the earth with the terror of his name—after having deluged Europe with tears and blood, and clothed the world in sackcloth, closed his days, in lonely banishment, almost literally exiled from the world, yet where he could sometimes see his country's banner waving over the deep, but which did not nor could not bring him aid.

Thus these four men, who seem to stand the representatives of all those whom the world call *great*—these four men, who each in turn made the earth tremble to its very centre, by their simple tread, severally died—one by intoxication, or as was supposed, by poison mingled in his wine—one a suicide—one murdered by his friends—and one a lonely exile. "How are the mighty fallen!"

HOROLOGY.



OROLOGY, or the art of measuring time by hours, minutes, and seconds, was known and practised in very early times; but for its connexion with correct me-

chanics we are indebted to the monks of the middle ages. The word *horologium* was in use among the ancients, which fact has led many to infer that mechanical contrivances similar to our clocks, were then in use. This inference is doubtless erroneous, since no ancient writer ever alludes to an instrument of that kind. The *pillar*, the engraved *dial*, the *clepsydra*, and the *hour-glass*, were the only *horologii* known prior to the sixth or seventh century.

Pillars, the length, inclination and return of whose shadows, indicated the progress of time upon the level surface around their bases, were doubtless the first time-measurers. It is believed (although we have no positive evidence of the fact) that the obelisks of Egypt were used for this purpose; and some have hazarded the opinion that the pyramids were also put to the same use, as their four sides correspond precisely with the cardinal points of the compass. It is certain that pillars were used in Greece for this purpose; and as Augustus thus used the Egyptian obelisks which he carried to Rome, this fact may be taken as *circumstantial* evidence, that for this purpose they had been devoted when first reared.

These huge *dials* were succeeded by those of a more portable kind. The invention of the dial proper, is conceded to the Babylonians, although the first mention of one on record, refers to a famous one that belonged to Ahaz the Jewish king, who reigned about seven hundred years B. C. "And Isaiah the prophet cried unto the Lord: and he brought the shadow ten degrees backward, by which it had gone down in the dial of Ahaz." 2 Kings xx. 11. As the Jews were no means an inventive people, it is su-

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posed that Ahaz procured this horologium at Damascus, where he obtained an altar and other curious things.

Of the construction of this dial we have no certain means of determining, but it is probable that it was similar to that introduced to the knowledge of the western nations by Berosus the Chaldee. The Rabbins says that it was a concave hemisphere, in the middle of which was a globe, whose shadow fell upon twenty-eight lines engraved upon the cavity. This description accords with that of one attributed to Moses and Apion. He says that Moses made a cavity and near it set a pillar, the shadow of whose top fell into the cavity and passed round it with the sun, thus marking the hours. Josephus pronounces this relation of Apion, false. Anaximander, who first introduced the dial into Greece, obtained a knowledge of it in Chaldea, about the time of the Jewish captivity. The dial of this traveller not only marked the hours, but the equinoxes, the solstices, and by their means, the seasons. Such dials were used by the Egyptians, and though chiefly employed as equinoctial dials in astronomical calculations, yet they were used for horary indications. All of these were hollow or hemispherical, as represent in fig 1 of



Fig. 1.

our engravings. This dial was found at Ravenna, about one hundred years since, and appeared mounted on the shoulders of a Hercules.

Figure 2 represents a large marble sundial once upon the point of a rock near the monument of Thrasyllus at Athens. It is supposed by some to represent the one whose invention is attributed to Berosus, before named, who lived in the time of Alexander; while others, guided by the meager remarks of Vitruvius (who, in



Fig. 2.

speaking of the dial of the Chaldean, calls it a *hemicyclium* or half-circle), believe that either of the two following figures better represents the dial of Berosus.

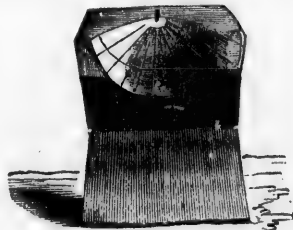


Fig. 3.

Figure 3 is copied from the "Antiquities de Herculaneum" and represents a dial formed of white marble, supposed to be of Etruscan construction. It was found at Civita in 1762. It is one of the most primitive class, and like fig. 4 so nearly resembles those of Chaldea, that most antiquarians agree that these, the dial of Berosus, and the dial of Ahaz, are all the same in form.

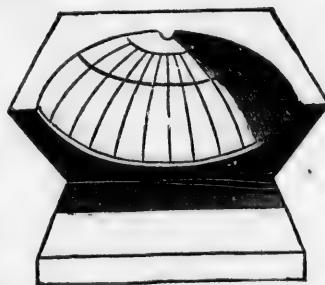


Fig. 4.



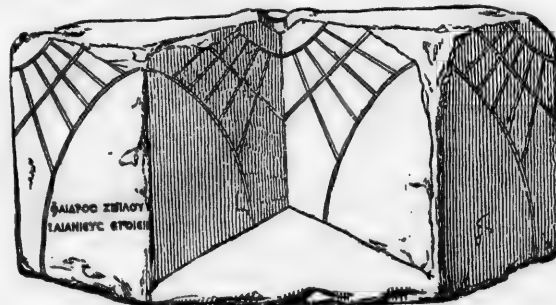
Fig. 5.

Our fifth illustration represents a singular kind of dial which was used by both the Greeks and Romans. How antique its origin is, we can not determine. This was found at Herculaneum, in 1754, and in 1755, a similar one was dug up at Portici. The one represented in our engraving, is in the form of a ham, the tail serving as a gnomon or object for casting a shadow, and having at the extremity a hook or ring for suspending it. The dial is on the back of the ham, where seven vertical lines are engraven, under which, in abbreviation, are the names of the twelve months, commencing with January. Six horizontal lines intersect the vertical ones and show the extent of the shadows cast by the gnomon on the sun's entering each sign of the zodiac. The hours of

the day are also pointed out by these intersections, the shadow descending with the rising and ascending with the setting sun.

Our next illustration represents a compound dial, which exhibits dials on four different faces of the stone. It was found at one of the ancient cross-ways of Athens, where it is supposed to have been erected for the public good. It is now in the British Museum among the collection of antiquities known as the Elgin marbles.

We have space only to give the general rules to be observed in the construction of dials, which are applicable to them all. Suppose 12 planes, making with each other, angles of fifteen degrees, passing through the axis of the earth and dividing the sphere into 24 equal parts, one of these planes being the meridial of the place of the observer; commence from the meridial and moving toward the west, number these planes 1, 2, 3, 4, &c., up to twelve, which will be the lower meridial of the place; commencing from this point, number as before, 1, 2, 3, &c., to 12, which will now fall on the upper meridial. These will form a series of horary circles, in passing from one of which to the next, the sun will occupy one hour. At noon it will be on the meridial numbered 12; an hour previous it was on the last horary circle preceding, and it was 11 o'clock; an hour after, it will be on another circle representing 1 o'clock and thus it proceeds till the time of setting, and commences again at its rising. Suppose now an opaque plane, passing through the centre of the earth, and intersected by the



Compound dial of Athens.

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twelve planes in as many diverging straight
lines, and mark these lines with the num-
bers belonging to their respective planes.
This opaque plane will represent the face
of a dial, the straight lines will form the
horary lines marked on its surface, and
the style, or gnomon, will represent the
axis of the earth, and will project its
shadows successively on each of the hour
lines, the number affixed to which will
show the hour of the day. This is the
theory of dials; and one calculated for
any given place, will serve for any other
place under the same meridian, provided its
position in the latter place be parallel to
its position in the former place.

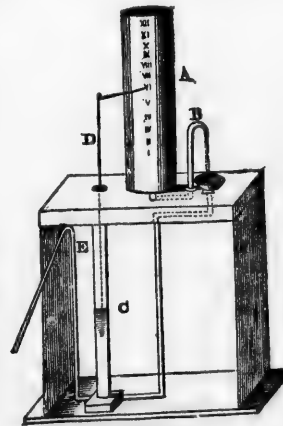
The most simple method for measuring
time, next to the *dial* is the *hour-glass*,
which was doubtless used prior to the
more complicated clepsydræ.

Hour-glasses are made of various forms
for the purposes of ornament, but the in-
terior construction of all is necessarily the
same. It represents two cylindrical cones
of glass, joined at the apex. At the point
of conjunction there is a small aperture,
just large enough for a certain sized sand
in a given quantity to pass through within
the space of an hour. This sand is put
into one of the cones, and when it has all
run out into the other, completing the
measurement of the hour, the glass is re-
versed, and the sand again commences its
descent.

The *Clepsydræ* or *water-clock* was brought
into use by the Greeks at an early period,
probably about the time of Pythagoras.
They were first constructed by the phi-
losophers for the purpose of determining,
by measuring time precisely, some of
their problems; such as the time required
for a certain body of a given weight to
pass through a medium of given distance
and density. Their correctness caused
them to be used afterward for the measure-
ment of time. Ctesibius of Alexandria,
who flourished about two hundred years
prior to the Christian era, spent much
time in bringing this instrument to per-
fection, yet he did not advance it to that
point of usefulness to which the Greeks
afterward carried it.

The utile portion of the clepsydræ is
simple, but the ornamental parts were
often made in a complicated and expensive

style. In the earliest water-clocks, which
were in principle of action similar to the
hour-glass, the indication of time was
effected by marks corresponding to either
the diminution of the fluid in the contain-
ing vessel, during the time of emptying,
or to the increase of the fluid in the re-
ceiving vessel during its time of filling;
but it was found that the water escaped
much more rapidly out of the vessel when
it was full, than when it was nearly empty,
owing to the difference in the pressure of
the atmosphere, and it required great in-
genuity in adjusting the marks upon the
index, so as to correspond with this varia-
tion.



Clepsydræ.

The construction of a clepsydræ for
the most correct measurement of time is
shown in our engraving. The cylinder
A on which twelve hours are marked, is
hollow, and serves for a reservoir to con-
tain the water. At the bottom is an aper-
ture through which the water passes into
the pipe B; this pipe has a very small
orifice whence the water escapes with a
certain rapidity, and falls into the cup be-
low, having an opening at the bottom
similar to the reservoir. From this cup
the water flows into the receiving cylin-
der C in which it rises to a given height
each hour. A piece of cork with a wire
D attached is placed in this cylinder, and
floats on the surface of the water. To

the wire an index-hand is fixed, which, as the cork rises, points out the hours upon the large cylinder. A siphon E is attached, which exhausts the water in the cylinder C as soon as it rises to a certain height, and the indicator falls to figure I, to commence its daily labor again. By increasing the length of the two cylinders, twenty-four hours may be marked and measured, before the clock needs *winding up* by the siphon. When Julius Cæsar invaded Britain he found a kind of clepsydræ in use among the inhabitants of the southern part of the island. They were in common use at that time in Rome, and continued so in Italy, as late as the sixth century of our era.

At what precise time *clocks* or machines for horological purposes, combining wheels and springs, were invented, can not be determined. Vitruvius mentions incidentally, an Alexandrian artist who combined springs and wheels with the clepsydræ, about 41 B. C. It is mentioned in an old chronicle, that Haroun al Raschid, calif of Bagdad, sent a clock as a present to Charlemagne, but from a more minute detail elsewhere given, it seems to have been an ingenious *clepsydræ*, which had the addition of bells, to record by sounds the termination of each hour.

It is related that an artist named Dondi, constructed a clock for the city of Padua, in the fourth century, and that a short time afterward one Zelandier made one for the same city, still more complex, which was repaired in the sixteenth century by Janellin Turrianus, the mechanic of Charles V. These, two, were doubtless improved clepsydræi.

We have no positive proof that clocks, similar to those now in use, were made previous to, or about the commencement of, the twelfth century. Near the close of the eleventh century, William, abbot of Heischan in Saxony "invented," according to his biographer, "a horologium similar to the celestial hemisphere;" and from corroborative testimony, it appears clear that this monk was either the inventor of the modern clock, or was the first to introduce it into Europe.

In the thirteenth century, Sultan Saladin gave a clock to the emperor Frederic II., which was put in motion by weights and

wheels. It marked the hour, the course of the sun and moon, and the planets in the zodiac. On this fact, many authors found a reasonable belief, that clocks were invented by the Saracens, and made known to Europeans in the time of the crusades.

During the sixteenth and seventeenth centuries, great improvements were made in the construction of clocks, many of which exhibited a complication of machinery for the exhibition of automatic figures, as well as sidereal and lunar observations, truly wonderful. Of these, the clocks of Strasburg and Lyons were the most remarkable. The invention of the pendulum, and its great improvements by a combination of metals, advanced the art of clock-making rapidly from the seventeenth to the eighteenth century, and brought it to that perfection and accuracy which it now exhibits.

Watches, or as they may be properly called, portable clocks, came into use in England a short time prior to the reign of Queen Elizabeth. The first watches were not intended to be worn about the person, but were constructed for the convenience of transmission from place to place. A watch in the reign of Elizabeth was about the size of a dessert-plate of the present day. This applies more particularly to one owned by the queen herself. But Shakspeare, who lived during her reign, alludes in his *Twelfth Night* to a watch evidently worn in the pocket. In the reign of Charles I. their dimensions were considerably reduced; but it was not till the reign of James, near the close of the seventeenth century, that pocket-watches came into general use.

Watches were quite common in France and Germany about the middle of the sixteenth century, but they were too unwieldy for pocket service. A German named Huygens and Dr. Hooke, an Englishman, for a long time disputed for the honor of the invention of the watch proper; the majority give the palm to Dr. Hooke.

Our space will not permit us to give a detailed description of the mechanism of modern time-keepers, included under the several names of clock, watch, and chronometer. We introduce an engraving representing the machinery of a common watch, and this will serve to illustrate the

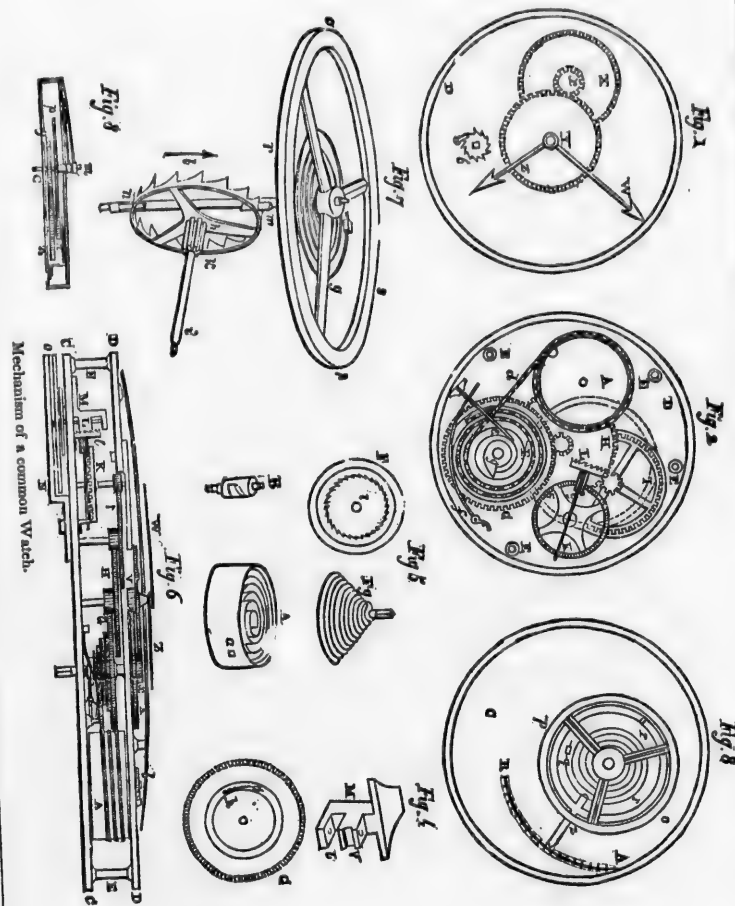
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principle of all other horological machines of the present day.

Figure 1 represents the dial-plate with the hour and minute wheels and indices. X is the minute wheel, Z the hour wheel, and Y the cannon pinion, or a hollow piece of steel which adheres by friction to the arbor of the centre wheel of the watch, and passes through a socket in the hour wheel. At the lower end are leaves or teeth that turn the minute wheel. To the upper square end the minute hand is attached, while the hour hand is fastened to the socket of the hour wheel.

Figure 2 and figure 6 present two views of the machinery of a watch; the first, of all between the plates, the second, of the whole complete. Figure 2 gives the forms of the wheels, and figure 6 their action. In the former, A is the box containing the mainspring; G is the main wheel with the fusee attached; H is the centre or second wheel; I the third wheel; K the contrate wheel turning horizontally with perpendicular teeth; L the balance-wheel; EEE the pillars which connect the plates; d the chain attached to the fusee and mainspring box; e a small piece of steel borne down by a delicate spring f, to prevent the chain from running off the fusee at the top.

Figure 6 represents the action thus: A the cylindrical box containing the mainspring round which the chain is wound connecting it with the fusee. To the fusee the main wheel G is attached, having forty-eight teeth on its circumference, which turns a pinion of twelve teeth, fixed on the arbor of the centre wheel H, so called from its being in the centre of the watch; it has fifty-four teeth which turn a pinion of six teeth, on the arbor of the third wheel I, which has forty-eight teeth; it is sunk in a cavity formed in the pillar plate, and turns a pinion of six, on the arbor of the contrate wheel K which has forty-eight teeth, by which it turns a pinion of six, attached to the balance-wheel L, which has fifteen teeth. One of the pivots of the balance-wheel turns in a frame M, called pottance, and the other pivot runs in a smaller piece called counter-pottance. The teeth of the balance-wheel impel the balance. The arbor of the balance, called the verge, has two small pallets or leaves

projecting from it at nearly right angles; these are acted upon in such a manner by the teeth of the balance-wheel, that, at every vibration of the balance, aided by a fine spring, a tooth of the wheel is allowed to escape or pass by, at the same time giving an impulse to the balance. This part of the watch is called the *escapement* from this fact, and is clearly shown in figure 7. O, p, s, r, indicate the balance, g the hairspring, h the balance-wheel, k the pinion in which the contrate wheel acts, and m, n, the two pallets upon the verge. The arrow l denotes the direction in which the balance-wheel moves.

A, figure 5, is the box with the mainspring coiled up within it. a is a small square hole in which a thick piece of steel, attached to the mainspring is inserted, which holds that end of the spring fast, while by the other end attached to the arbor B, it is coiled up. F, shows the bottom of the main wheel with the ratchet l, and F, g, the fusee on which the chain is wound, and which is attached to the main wheel. Figure 4, shows the form of the pottance. V, is the place for the slide containing the hole for the balance-wheel pivot, and l the bottom on which the verge pivot rests. Figure 8, shows the top plate with the balance o, the hairspring v, the regulator z, and the index to the regulator marked R, A.

When it was ascertained by navigators that good time-keepers were highly useful in determining correctly the longitude at sea, the attention of the mechanics and even of the government itself of England, was turned to the subject of so improving spring clocks, or watches, as to make them capable of enduring the vicissitudes of heat and cold without variation. In the reign of Queen Anne, the parliament offered a reward of twenty thousand pounds sterling, for a method of determining the longitude with the accuracy of thirty miles, or half a degree of a great circle. Harrison, a watchmaker, after great labor and industry, produced a time-keeper which he called a chronometer, that procured him the offered reward. He effected his object in equalizing the contraction and expansion of the spiral spring and balance, by a combination of two metals, of opposite expansions, by which he formed a self-

regulating curb. This principle is now applied to pendulum clocks, with the addition of mercury, placed in a jar which forms the ball of the pendulum. These are the only clocks that will keep time during a whole year, exposed to the vicissitudes of the seasons, without change.

The chronometer has now become an indispensable instrument on board of every vessel. When properly regulated and rated, it is astonishing to witness the accuracy with which they measure time. About five years since, we had charge of one for several months, and from November till the following May, it did not vary quite five seconds from its rate.

NO PERSON UNIMPORTANT.



THE pride of wealth and individual state tend to make many members of the social scene appear extremely unimportant. And, in our ordinary moods, we are accordingly very apt to feel toward such persons as if they were scarcely entitled to be reckoned as existing. We here commit a great mistake. It would be of little use in this place to show its inconsistency with high doctrines as to the nature and destiny of man, but the same end may be served if it can be shown as fallacious upon the simplest worldly considerations. No member, then, of any body of men can be unimportant, so long as men live in society, for in that state—such are the relations arising from the fact of our all partaking of the same nature—the highest are liable to be affected in some degree in their fortune and happiness by the meanest. So bound up are we together in interests, that what hurts one hurts all, and we really thrive as much in things favorable to our neighbor, as in those bearing immediately upon ourselves.

First, as to a community of bodily qualities. Here the pride of natural endowment, as well as that of conventional dignity, is sadly humbled; for, as is well known, there is not the slightest difference

between the physical constitution of the greatest man and that of the humblest. Both, accordingly, are liable alike to influences calculated to operate injuriously on the bodily frame. When any one asks, therefore, of what earthly consequence to the proud and great is the existence of any particular specimen of the humble, it may be sufficient to point out that an infectious disease affecting the latter may be communicated to the former, and involve both in common ruin. How often has it happened that a beggar has brought to a city a malady which has swept off multitudes of the higher as well as inferior classes! The rising of disease among the miserable classes, and its spreading upward among the affluent, is unfortunately a phenomenon not confined to past periods of history. It is on such occasions that the importance we are all of to each other is brought most affectingly before us. We then see how it might have been of consequence to some family living in easy and elegant circumstances, that some other particular family living in wretchedness, in a distant part of the same town, had been in time succored with a brotherly help, and so redeemed from the danger they were in of proving a bane to all around them. It is a terrible form of admonition, but is it not a just one, considering that we really are one family, and therefore ought to love and cherish one another? The care of the disease which has been allowed to arise, the charge of the helpless dependants of those who have perished—these being exactions so much greater than what would have prevented the evil at first—may well be regarded as penalties incurred by society for its omissions of duty. Man, in his hardness of heart, or under the guidance of false principles, may rebel against these ordinations of Providence; but, till he can change the arrangements by which we all move and breathe, he must choose between the two courses, either to regard all his fellow-creatures as brothers, and to act by them accordingly, or to remain exposed to the many dangers by which, through his neglect of this maxim, he must ever be surrounded.

We may now inquire how the humble become of importance to the rest from a

community of moral constitution. This is simply because moral conditions follow the same law as physical, and that we are thus, as in the former case, enabled to affect each other for good or evil. In the classes called miserable, who are the humblest of all, there must needs be, as a general result, very low moral conditions. Here, indeed, we usually find a concentration of almost all the vices of which our nature is capable. The corruptions spread outward and upward, exactly like a pestilence, and inevitably tend to contaminate the better classes. Even in the necessity which they occasion for a defensive vigilance on the part of their superiors, they do a great injury, for thus are men's hearts shut up, and mutual love and confidence extinguished. Still worse are the results of the penal severities which they call for, for every blow of the sword of Justice tends in some degree to harden the feelings of the community. Thus are the mean made important to the exalted; thus does the moral situation of the poorest and vilest of mankind become a matter of some interest to the very highest, wide as is the social gulf which appears to lie between them.

Let us now see how it stands with regard to an individual against the whole mass of society. There is a tendency in many persons to suppose that they are unimportant to their fellow-creatures, and that their conduct also is unimportant, because they form respectively but *one* out of a mighty number. There could not well be a greater mistake than this, for there is no such thing as a thoroughly detached and isolated individual: we are all inextricably tied up and interlaced with each other; so that no man can live or act without affecting others in some degree, and, to some purpose, concerning their weal or woe. Look alone to the principle of imitation. Through this principle every one is, consciously or unconsciously, modifying the tendencies of all who have opportunities of seeing or judging of him. That disposition which more or less inspires us to walk by some neighboring example, tells powerfully, even by itself, in making everybody's conduct important. Superadded to this, there is a disposition in many to venerate those with whom they

are brought into contact; and where this is the case, there will be a much more powerful tendency to follow the line of conduct exemplified. Who can tell what fascination he may, every moment of his life, be exercising over some humble, though unknown worshippers, leading them right or wrong according as he may chance to act? There are no doubt very various degrees of personal influence; yet it is equally indubitable that hardly any person is so extremely humble as not to be surrounded by some who, either from imitation or veneration, or from a mixture of both, will be affected to good or evil by his example.

Besides this, it is in the very nature of every moral phenomenon to be diffusive. A good or bad act is like a stone dropped in a pool, which sends out a succession of waves all around, until the impulse first given is exhausted. The good act goes forth smiling in the face of mankind, and makes all smile delightedly who see or hear of it; the bad act bursts out with a frown, which darkens all around it. That is to say, when we witness or are informed of an act comprising conscientiousness, kindness, self-sacrifice, magnanimity, or any other noble principle, we naturally are warmed by it into a love of the same good principle, and are strengthened in a wish to do likewise. And when we see or hear of an act comprising inhumanity, base deception, or injustice, we are at the best roused into the exercise of a resentful principle, which, though we may call it honest indignation, does in reality give us no positive advance as moral beings—possibly we are only sullied by the passing of a wave of the muddy waters of error over our minds. Accordingly, that there should ever be a bad deed done, or a foul or harsh word spoken, is a misfortune and an evil to all around—no saying to how remote a shore of society's mighty ocean. A moment sees the deed done or the word issued, and years may not see its waves spent on those distant beaches. Little, and apparently trivial at first, it may so act and react in the sphere which it affects, that at length it comes to be a wide-spread and devouring mischief. Thus is the peace of families daily broken; thus do poor mortals, by momentary slips,

lay up stores of calamity for themselves; thus arise wars and desolations of kingdoms, retarding the coming of good to man indefinitely. If this is a true view of the matter, it follows that no man's conduct is unimportant to society. Individually, we reap the benefit of every good emotion that rises in the bosom of another: collectively, we are punished for the errors of every individual.

If the humblest be thus morally important to the rest, how much more so are those whose position gives them more than the average proportion of influence. All conducts bears an immense increase of consequence when it is connected in the popular mind with rank, wealth, talent, and distinction—usually held in esteem. Great, accordingly, is the responsibility of those so endowed for their every word and deed. Here there can, indeed, be no pretence of the unimportance of individual conduct, for the effects are open, palpable, and universally acknowledged. It would be too much to expect that the claim upon such persons should be in every case carefully regarded, but let its importance at least be as generally impressed as possible. The responsibility seems particularly obligatory where the superiority conferred is that of superior intellect. We there look more expectantly for every form of good, and are the more rejoiced or saddened as our expectation is gratified or disappointed. Pitiably, too, is it for the erring spirit himself, for how thoroughly does he thereby balk the design which Providence had formed in his favor! Men of superior intellect are the natural leaders of their species. They have a rank placed before them, to be secured by the right use of their abilities. Their abusing that gift is as thoroughly a casting of precious fortune at their feet, as is the prodigal spending of a miser's hoard by an impatient heir. They might go crowned amidst their fellows, with the palm-trees of triumph waving around them, and they consent to wallow in the mire, to the disgrace of themselves and the pollution of their neighbors.

Let no one, then, ever say to himself or others, I am of no consequence; I am poor and despised, and of no account; or, I am only one among many, and have

no influence. The poorest class tells powerfully on the highest. The despised is a subject of very fair anxiety to the most exalted; and every person, however limited his gifts, is continually operating for good or evil on all around him.

SPECTACLES.



ACCORDING to the best authorities, spectacles consist of two lenses so arranged in frames as to aid defective vision. To this end, and to suit every sort of visual deficiency, great varieties of the article have been invented. There are magnifying glasses and diminishing glasses, and glasses through which objects appear of their actual size. There are spectacles for daylight, spectacles for candlelight, and spectacles tinted with all sorts of hues, from pleasing pink to a sombre slate-color. Some are constructed to enable the wearer to perceive things which are at a distance; others to increase the distinctness of things which are near; Dr. Wollaston's periscopic spectacles allow of looking sidewise; and De La Court's reflecting glasses make up for the want of eyes in the back of the head, for they reveal what is going on behind backs! Again, viewing spectacles in reference to quality, and as articles of manufacture and trade, there are good, indifferent, and decidedly bad spectacles, the last being made not so much to be seen through, as—like the razors described by Peter Pindar—to sell. These generally give distorted appearances to objects, for the clearer viewing of which they were brought to assist.

It is our purpose in this article to abandon the literal signification of the word spectacles, and to treat the term abstractedly from the actual article which is seen in the shops, in pedlars' packs, and on the noses of our elderly friends. We seek to give greater currency to the more enlarged, though metaphorical sense in

which the word is used by many authors of high repute, both ancient and modern. Thus, Chaucer saith, that :—

"Povertie a *spectacle* is, as thinketh me,
Through which he may his very friends see."

And Dryden, in commenting on the genius of Shakspeare, truly observes, that the great dramatist "was naturally learned—he needed not the *spectacles* of books to read nature." Thus, as a man is sometimes said to "see" that which is invisible, such as a fine thought, the point of a joke, or the force of an argument; so would we draw attention, not to mechanical, but to psychological spectacles—not to those which aid or derange the actual organs of sight, but to those which assist or falsify the mental vision.

These metaphorical spectacles being worn by a large majority of mankind, are in quite as great variety as the spectacles we have described, and suit themselves to every age and condition. Ardent and imaginative youth, for example, on first entering active life, wears spectacles which exhibit everything in the brightest colors. Its keen sense of enjoyment, which makes it feel the mere act of existence to be a pleasure, extracts gratification out of whatever is presented to the senses. Painful feelings, when excited in the young, are transient, and serve rather to heighten the effect of general enjoyment than to lessen it. Worldly experience has yet to darken the glowing picture—to give more truthful, and, alas! less favorable views of mankind, but, on the other hand, to exchange for restless and fevered, more permanent and assured sources of happiness. Hence, to the glowing imagination of such natures it is always summer; and they do not, as in after-life, enjoy the coming of the spring, because they know no winter. To them all men appear good, all nature seems beautiful. Such temperaments see everything *couleur de rose*—they wear *pink spectacles*.

These spectacles are by far the most dangerous to the real as well as to the mental perception. "The habitual use of tinted spectacles," remarks an experienced optician, "gives rise to a succession of violent changes of color, which are painful to the unpractised, and must be injurious to those who have become inured

to them." This is exactly the case with the false medium through which the world is often seen by youthful enthusiasm. Many a young man, viewing mankind in too glowing a light, has had some act of human frailty (by which, perhaps, he is made to suffer) unexpectedly revealed to him—has had the pink spectacles suddenly dashed from his vision! Then, in proportion as all was before unduly brilliant and beautiful, all appears now as falsely dark. He is what is called a "disappointed man." His imagination, which at first exaggerated the goodness of mankind, now exaggerates its wickedness. The darkened spectacles which are substituted as much incapacitate him from enjoying the brightness of the sun, as those he previously wore increased it; and he who before saw universal goodness, ceases to believe in benevolence; and the character of every human being appears to be shaded with self-interest or other faultiness. By constantly regarding the shadows of the picture, and those only, he grows old in his fatal uncharitableness, and is reduced to the unamiable condition of a cynic—a Diogenes; but a Diogenes who looks for honest men—not with a lamp, but with a dark lantern—for his vision is obscured with "*clouded spectacles*." Of a similar stamp are those desponding spirits who have a taste for the dismal of this life; who take delight in sighs and sadness, pathetic emotions, and heart-rending woe, and view human nature "through the lens of a tear."

Other varieties of spectacles are very generally worn, which are neither pink nor clouded, but work in matters of lesser importance the effects of both. The wearers of them are never contented with truth and nature simply as they see her. If they have to describe a hill, for example, they will tell you the ascent is almost perpendicular, and make reference to the Alps. A slight drizzle they exaggerate to a perfect torrent; for with them it never rains but it pours. In picturing a female acquaintance, with however moderate pretensions to beauty, they constantly apply the well-worn similitude concerning angels. Their particular friends are patterns of virtue, their enemies monsters of wickedness. They see everything in ex-

is exactly the case with through which the world is seen by youthful enthusiasm. A man, viewing mankind in the light, has had some act of heroism which, perhaps, he is not expected to reveal. He is suddenly revealed to pink spectacles sudden vision! Then, in proportion before unduly brilliant, he appears now as falsely that is called a "disappointment." His imagination, which had the goodness of managing its wickedness, spectacles which are sublimely incapacitate him from brightness of the sun, as he is more increased it; before saw universal good—believe in benevolence; matter of every human being shaded with self-interest or By constantly regarding the picture, and those of the picture, and those reduced to the unamiable cynic—a Diogenes; but a looks for honest men—not out with a dark lantern—observed with "clouded" a similar stamp are those spirits who have a taste for this life; who take delight in sadness, pathetic emotions, in woe, and view human life through the lens of a tear."

There are many varieties of spectacles are very common, which are neither pink nor black, but work in matters of lesser importance the effects of both. The man is never contented with what he simply as they see her. He is to describe a hill, for example, he tells you the ascent is almost insurmountable and make reference to the weather; when it drizzle they exaggerate the weather; for with them it never rains. In picturing a female friend with however moderate pretensions to beauty, they constantly appear to be in similitude concerning their particular friends are patients, their enemies monsters of iniquity. They see everything in ex-

trema, and are themselves subject by turns to the most delightful happiness, and to the direst misery. When a little pleased, they declare they are enchanted; when a little pained, "the agony is excruciating." Nothing that passes before, around, and within them, seems to present itself as it does to other eyes; for the fact is, they wear *magnifying glasses*.

Other persons want comprehensiveness of mental vision. Propound to them any grand scheme of benevolence or utility, and they try to scare you away from it by summing up the petty difficulties which lie in the way. Praise the character of a friend, and they peck away the value of your commendations by hinting certain minor faults and immaterial piccadilloes. The spectacles they wear contract their range of vision to a small circle; they can not see beyond a certain distance, and have not an idea beyond to-day. Things or thoughts of large dimensions are out of their ken, but they have a wonderful discrimination for small ones. They make excellent anatomists and entomologists, while they appear unable to understand the general principles of natural history. Show them the boundless ocean, and they will discourse of pebbles—a landscape, and they talk of plants. Speak of the evils of war, and they will try to remember whether any of their acquaintance has swelled the list of killed and wounded—if they can recollect none, then they can not see why war should be so much condemned, more particularly since they happen to have a friend who made a fortune as an army contractor, and gives capital dinners. Such men, it will be observed, never see things through the same medium which the rest of the world does; there is always a diminishing power which contracts their vision, and though aiming at principles, they fasten on a mean set of details. Many of this class are to be found in the critical world. A swarm of them fastened on the old English dramatists at the end of the last century, wrote voluminous commentaries on the meaning of single words, and indited portly pamphlets to discuss whether we should write *Shakspear* or *Shakspeare*. In modern times, these minute observers discover, in a new book, where the comments have been

left out, or misplaced; or, like Sergeant Circuit in Foote's farce, non-suit an aspiring author in the courts of criticism for leaving out an *s*. These geniuses wear *diminishing glasses*.

Then come your shy people, who can not look you straight in the face, and only see out of *side-spectacles*; next, those who never see what is before them in its true phasis, and who, do what you will for them, torture the motive of your acts to some impulse quite different to that which dictated it. This is the consequence of wearing *distorting spectacles*.

Above all, we must not forget those psychological curiosities who pride themselves on being extremely sharp observers. They are generally gifted with piercing eyes and busy tongues, and are constantly trying to look round corners—to penetrate into places where there is nothing to see, and to make discoveries where there is nothing to find out. These are among the "clever" of the human race, who boast of never being deceived, for their eyes are everywhere; though, unfortunately, it mostly happens they are everywhere but where they ought to be; and in performing their indefatigable periscope, are so often looking behind, that a stumble is now and then the consequence. These would appear to apply to their mental perception the *periscopical reflecting spectacles*.

There is, besides, a vast variety of spectacles mounted by certain individuals before their mental perceptions, which have no analogy to those to be found in the optician's catalogue. The most generally worn are professional spectacles. Physicians, for instance, often see through medical spectacles. An esteemed valedictorian, who has retired from medical practice, invariably answers our ordinary inquiry of "How do you do to-day?" with a diagnosis of his complaints; and when you succeed in drawing him out concerning the floating news of the day, he makes especial inquiries after the "public health in your neighborhood." He distinguishes his friends not by their outward appearance or general dispositions, but by the state of their health; and instead of calling people by their names, he talks of the lady with the liver-complaint, the gentleman afflicted with bronchitis, or that niece

of his who is troubled with syncope. He will point out Mr. So-and-so as an excellent person in some respects, but blames him severely for not wearing thick shoes in wet weather, and talks of the poor man's catarrh as if the complaint were a moral crime. When he travels, he observes nothing but the climate and the diseases of the population: when he makes a call, he takes away the compliment of the visit by declaring he came out for a little exercise—in short, all his actions are regulated by medical principles, and all he sees is presented through a medicated medium. In a similar manner one class of men wear statistical, another geological, and a third gastronomical spectacles, the last judging of every object in nature by its eatableness or drinkableness. Lastly, the man of fashion—sees the world through an opera-glass.

It is on account of the number and variety of mental spectacles which different people wear, and the pertinacity with which they keep them on, that truth is so difficult to be met with. Thus, a dozen men shall look at the same object, yet their account of it will differ in some material particulars; for the impressions it makes upon their minds depend entirely upon the kind of spectacles they happen to wear, which, fixing their attention upon especial characteristics, and on them only, blind them to other important features. As an illustration of this, let us suppose a number of individuals looking at some ordinary object—something plain, palpable, and about which it would appear to be impossible to differ either in description or opinion; say, for example, a flock of sheep in a field. The young observer, with his pink spectacles, paints to you their picturesque grouping, the innocent playfulness of their gambols, and the pleasing animation they give to the surrounding scenery: his account of them would be, that they are "beautiful sheep." He with the clouded spectacles, on the contrary, instinctively fastens his observation on the black sheep; he picks out the lean ones, and builds a theory thereon, by which he would endeavor to prove the deterioration of stock in this country; describing this particular flock as a "wretched one." The man with magnifying glasses insists

that there must be at least twenty score; but his friend with the diminishers pins him down to units; while the statistician with cruel pertinacity counts the whole flock, triumphantly certifying that there are exactly one hundred and thirty-eight sheep and nineteen lambs. He also reckons, that, supposing there be so many pounds of wool upon each sheep, the whole produce of the flock would be so much at the then market price of wool; that this wool would be capable of making so many yards of cloth, which cloth would, if cut to advantage, furnish so many hundred garments. Let us now suppose the gastronomer to make a characteristic remark on the fineness of the mutton, and the rich order it is in for the spit, the statist would launch into another branch of numeration, by setting down the number of joints the whole flock would cut up into: so many haunches, or, if separated, so many legs and so many loins; or, if the loins should be destined for broiling, so many mutton chops. Take the statements of either of these observers separately, and a false, or at most a limited idea of the actual objects would be derived; but put them together, and we are in possession of every fact concerning sheep which it is useful or necessary to know. Thus, the specific views afforded by the various sorts of spectacles which mankind put on, are of the utmost value, when assembled and properly weighed by persons who do not habitually wear any spectacles.

Few are, however, entirely without mental spectacles at some time of their lives—and how constantly are circumstances changing them! How apt are we to allow health or sickness, prosperity or misfortune, to place spectacles before our vision, which tinge everything around us with the prevailing feeling! In ill health, how "weary, flat, stale, and unprofitable" are the same objects from which, when in the full enjoyment of health, we derived pleasure and happiness. On the other hand, how many by no means romantic or picturesque scenes are hallowed in the recollection, when viewed through the spectacles created during some moment of delight enjoyed there—the society of a friend we have esteemed, or the smile of one we have loved!

THE END.

JUL -1 1843